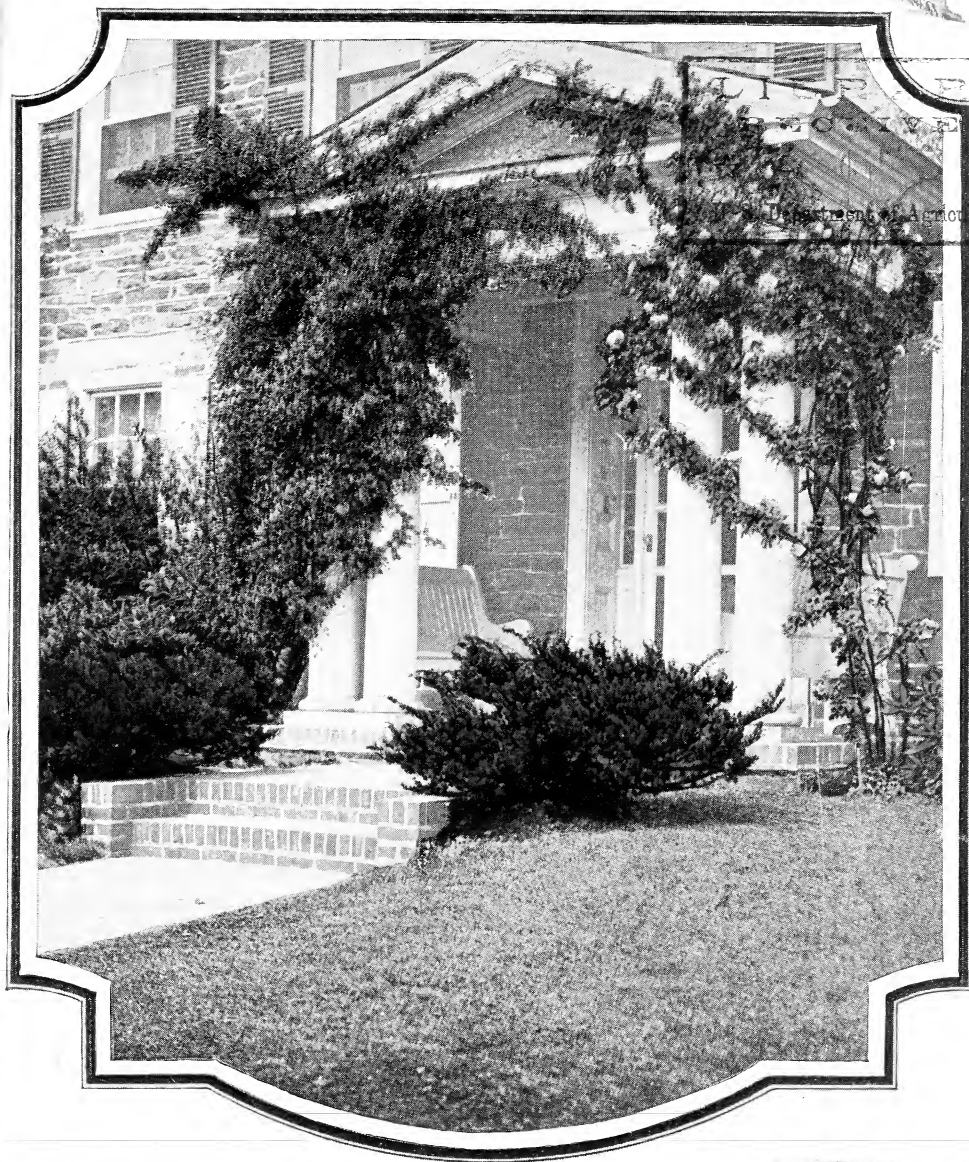


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Do not assume content reflects current scientific knowledge, policies, or practices.



“Come Right In”

TO

The Munson Nurseries

DENISON, TEXAS

An Invitation



PLEASE do us the honor by accepting this catalog as a cordial and sincere invitation to come in and spend a few moments. We do not want you to buy unless you find that we have something that you need, and you are sure that our stock is superior and well fitted to satisfactorily fill your needs. By looking over the catalog, it may suggest many items that will make your home and home grounds more beautiful and your orchard more fruitful by planting the best that is to be had both in selection of varieties and quality of stock.

If you do find something that you want, and we are sure that you will, we want the pleasure of supplying that want.

In order that you might get the very best results, we give on following pages some general cultural directions that are very important. Then on the page listing books we point out some special information for those who desire to go more thoroughly into getting the very best out of what they plant.

For terms and manner of doing business we call your attention to same on page 32 of this catalog.

In reading this catalog, we want you to feel perfectly at home, just the same as if you were here enjoying the hospitality of our home, and surroundings.

Location—Denison is 75 miles north of Dallas, and has the best of transportation facilities. The following railways enter Denison: The M-K-T. Railway from five directions; The Frisco Railway from two directions; the K. O. & G. Railway; the So. Pac. Railway; The Texas Electric Railway.

Yours for better fruits and more beautiful homes,

THE MUNSON NURSERIES

Will B. Munson, Proprietor

DENISON, TEXAS

HINTS FOR PLANTERS

Time of Planting. In this climate, vegetation, although inactive in winter for the formation of leaves and new wood, is never so as to new roots. A tree transplanted in the early winter will, by the ensuing spring, have grown sufficient new roots to give it a firm hold in the ground, and will grow off rapidly when active vegetation commences. Plant as early after the first killing frost as practicable, although hardy stock can be safely transplanted any time during the winter when the ground is not too wet or frozen. Planting can be continued until the middle of March, or until just before the buds begin to swell.

Preparation of the Soil. The most desirable soil for fruit trees is a rich loam, naturally dry or made so by drainage. Peaches and plums must be planted on high, well-drained soil. Before planting, prepare the land by thoroughly plowing and subsoiling, first using a two-horse plow, followed by a sub-soil plow. Lay off the rows at required distances, and dig holes at least two feet wide and two feet deep; fill the holes by breaking in the sides, commencing at the bottom and going upward. Use surface soil in filling up, and with this mix one or two shovelfuls of thoroughly decomposed barnyard manure, or use one or two pounds of good bone meal. All fertilizers must be thoroughly incorporated with the soil. Avoid the contact of the roots with heating manures.

We strongly advocate digging holes with dynamite whenever feasible.

Preparation of Trees and How to Plant. Before planting, remove the broken roots; cut back one-year peach, apple, pear, cherry and plum trees to a naked stem $1\frac{1}{2}$ to $2\frac{1}{2}$ feet high, leaving no side branches. Two-year-old trees should have their branches cut back to half their length or less; the lower limbs less than those above, cutting in shorter as you go upward, leaving the leader the longest. The tree should be set about 2 inches deeper than it stood in the nursery.

Cultivation. You cannot expect to get good results from your trees unless you keep them well cultivated. The soil must be frequently stirred during summer. The area immediately around the trees must be kept free from grass and weeds, and this portion of the orchard should receive especial attention. All suckers or branches which start below the head of the tree should be removed. For the first two years cultivate the orchard during summer in some crop suited to the location, such as cotton, vegetables, melons, peas, peanuts, velvet or soy beans, giving the preference to leguminous crops. Never plant corn or small grain in your orchard.

It is always advisable to sow in the fall a cover crop, such as clover, vetch or rye, using a

suitable fertilizer. Turn under this cover crop in early spring. When soils are deficient in lime and potash, supply this deficiency with an application of lime, bone meal, hardwood ashes or high grade commercial fertilizer, as the soil requires. Satisfactory results cannot be expected unless the orchard is supplied with the proper plant food and receives careful cultivation.

Selection of Trees. For this climate, experience has taught us that one and two-year trees or thrifty growth (except peaches, only one-year trees of which should be planted) are the most desirable. Purchasers should bear in mind that such trees can be removed from the nursery with all their roots, whereas a four or five-year-old tree cannot be taken up without cutting away a large portion of them. Success in transplanting is increased according as attention is paid in selecting well-rooted trees, instead of heavily-branched ones. Give as many sound roots and as little head to a tree as possible.

Care of the Trees on Arrival. If not ready to plant on arrival, unpack without exposing the roots to cold or air; dig a trench, and heel-in by carefully covering the roots with earth, and give a copious watering. Trees thus treated can remain in the trench until ready for planting in the orchard. If frozen when received, do not open the boxes, but place them in a cellar or some cool, dark room that is free from frost, and let them remain until all frost is drawn out. If no cellar or frost-proof room, bury the box in sawdust or dirt until thawed. The point is to get the frost entirely out without sudden exposure of stock to heat, light or air. Even if frozen solid, the stock will not be injured if handled in this manner.

STATE AGRICULTURAL COLLEGES

from which the latest spraying and similar information may be obtained through correspondence.

Arkansas—Fayetteville
Colorado—Fort Collins
Illinois—Urbana
Indiana—Lafayette
Iowa—Ames
Kansas State College—Manhattan
Kansas University—Lawrence
Kentucky—Lexington
Michigan—East Lansing
Missouri—Columbia
Nebraska—Lincoln
New Mexico—Agricultural College
Oklahoma—Stillwater
South Dakota—Brookings
Texas—College Station

HORTICULTURAL INFORMATION

IN the various pages of this catalog we give a few important facts about the fruits, shrubs, etc., listed, but it is impossible to give any limited amount of information even in a catalog many times this size.

So, in order to place at the disposal of our customers a fund of horticultural information, we have listed below a select list of books bearing upon the different classes of fruits as found in the catalog. We could name many other very valuable books but space forbids.

We do not keep these books in stock, but will be pleased to order them for our friends and patrons without further cost than the publishers' prices, which are the prices mentioned with each book. If we kept the books in stock here, a higher price would have to be charged to offset the extra expense of maintaining a stock.

All you have to do is to send us the money as per price listed and we will take pleasure in forwarding the order to the various publishers without further cost to you. The prices are net, postage included. No discounts.

APPLES

The Apple, by Albert E. Wilkinson. Illustrated, some in color, 492 pages.....\$3.25
The American Apple Orchard. F. A. Waugh. Illustrated, 226 pages.....\$1.75

PEACH

Peach Culture. J. A. Fulton. Best Work on Peaches. 204 pages.....\$1.60
Peach Growing. H. P. Gould. A fine work, illustrated.....\$2.50
The American Peach Orchard. F. A. Waugh.....\$1.75

CITRUS AND DATES

Date Growing. In the Old and New World. P. B. Popenoe. Illustrated.....\$2.50
Citrus Fruits. J. E. Coit. Illustrated.....\$3.25

NUTS

Nut Growing. R. T. Morris. Latest up-to-date book on this subject. Detailed methods of successful propagation, illustrated.....\$2.50
The Nut Culturist. A. S. Fuller. Illustrated. 290 pages.....\$2.00

HORTICULTURAL INFORMATION—Cont'd

GRAPES

Foundations of American Grape Culture. T. V. Munson. 250 7x10 pages. Illustrated.	\$3.00
Manual of American Growing. U. P. Hedrick. Extra fine on grapes.	\$3.25
Grape Culturist. A. S. Fuller, 282 pages.	\$2.00
American Grape Growing and Wine-Making. Geo. Husmann. 270 pages	\$2.00

SMALL FRUITS

Bush Fruits. F. W. Card. On berries, curants, gooseberries, etc.	\$3.00
Productive Small Fruit Culture. F. C. Sears. 368 pages	\$2.50
Small Fruit Culturist. A. S. Fuller. 298 pages.	\$1.75
Making a Garden of Small Fruits. F. F. Rockwell. Illustrated	\$0.75
The Book of the Strawberry. Edwin Becket. Also other berries	\$1.25
Strawberry Culturist. A. S. Fuller.	\$0.40
Strawberry Growing. S. W. Fletcher.	\$2.50

GENERAL FRUITS

American Fruits. Samuel Fraser	\$4.75
American Fruit Culturist. J. J. Thomas. 800 illustrations, 756 pages.	\$3.50
Beginner's Guide to Fruit Growing. F. A. Waugh. 120 pages	\$1.25
Successful Fruit Culture. S. T. Maynard. Illustrated. 274 pages	\$1.75
Fruit Harvesting, Sorting, Marketing. F. A. Waugh. 232 pages	\$1.75
The Fruit Garden. P. Barry. Invaluable to all Fruit Growers. 516 pages	\$2.25
The Home Fruit Grower. M. G. Kains. Heavily illustrated. Cloth	\$1.50
Fruit Growing in Arid Regions. Paddock and Whipple	\$2.60
Popular Fruit Growing. S. B. Green. 300 pages.	\$1.50
Principles of Fruit Growing. L. H. Bailey. Up-to-date Revision	\$2.50
Modern Fruit Marketing. B. S. Brown. 304 pages	\$1.75
Making Horticulture Pay. M. G. Kains. 288 pages	\$1.75
Productive Orcharding. F. C. Sears. 316 pages.	\$2.50
Systemic Pomology. F. A. Waugh. 288 pages.	\$1.75

FARMING

How Crops Grow. 416 pages. S. W. Johnson. Structure, composition and life of plant.	\$2.00
Dry Farming. Its Principles and Practice. 32 full page illustrations. Wm. McDonald.	\$2.00
Farm Horticulture. 354-pages, illustrated, 144 engravings. Geo. W. Hood.	\$2.75

PRUNING—PROPAGATION

The Tree Pruner. Samuel Wood.	\$1.00
Principles of Plant Culture. E. S. Goff.	\$2.00
Propagation and Pruning of Hardy Trees. J. C. Newsham	\$3.00
Pruning Manual. L. H. Bailey.	\$2.50
Principles and Practice of Pruning. M. G. Kains.	\$2.50

SHRUBS AND ORNAMENTALS

How to Make a Flower Garden. Many Experts. Illustrated	\$2.50
Let's Make a Flower Garden. Hanna Rion.	\$2.00
Evergreens and How to Grow Them. C. S. Harrison	\$0.75
Farm and Garden Rule Book. L. H. Bailey.	\$3.25
Home Floriculture. E. E. Rexford.	\$1.75
Practical Floriculture. Peter Henderson. 325 pages	\$2.00
Shrubs of the United States. A. C. Apgar. Profusely illustrated	\$1.75
The Book of Shrubs. George Gordon.	\$1.25

ROSES

The Amateur's Rose Book. Julius Hoffman. Illustrations in color.	\$3.00
Commercial Rose Culture. Eber Holmes. Heavily illustrated	\$1.75
Rose Growing for Amateurs. H. H. Thomas.	\$0.75
Practical Outdoor Rose Growing. Geo. C. Thomas, Jr. 104 plates in color, 47 in black and white. DeLux Edition	\$7.50
New Garden Edition, having 15 plates in color.	\$3.00

Parson on the Rose. S. B. Parsons. 211 pages. Illustrated	\$1.75
The Rose. H. B. Ellwanger. 310 pages. Very complete	\$1.75
How to Grow Roses. Robt. Pyle. Very complete. Colored plates	\$1.50
Roses, Their History, Development and Cultivation. J. H. Pemberton.	\$5.00
The Rose in America. The newest work on American Roses for American Rose Lovers. By J. Horance McFarland. 245 pages with 20 full page photographic plates	\$5.00

IRRIGATION AND DRAINAGE

Drainage for Profit and for Health. Geo. E. Waring, Jr.	\$1.60
Irrigation Farming. L. M. Wilcox. 510 pages.	\$2.25
Irrigation for Farm, Garden and Orchard. Henry Stewart	\$1.60
Irrigation and Drainage. F. H. King. 502 pages.	\$2.50

LANDSCAPE AND FORESTRY

Landscape Garden Series.. Ralph Rodney Root. The most complete and best work of its kind. Published in 10 sections, so each one can be used independently and all come in one case. Highly illustrated. The work complete	\$6.00
Landscape Gardening. F. A. Waugh. Treating General Principles	\$1.25
The Landscape Beautiful. F. A. Waugh.	\$2.50
Ornamental Gardening for Americans. Elias A. Long. 300 pages	\$2.00
Hedges, Windbreaks, Shelters and Live Fences. E. P. Powell	\$0.90
Practical Forestry. John Gifford.	\$2.50

INSECTS, PLANT DISEASES

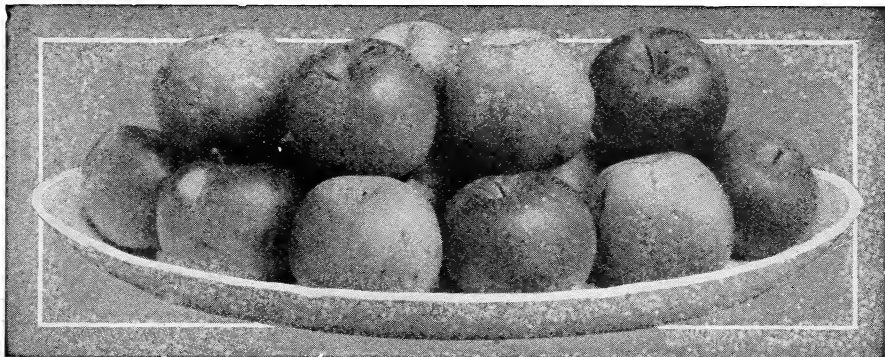
Diseases of Cultivated Plants and Trees. Geo. Massee	\$3.00
Diseases of Truck Crops and Their Control. J. J. Taubenhaus	\$6.00
Agricultural Entomology. Herbert Osborne.	\$2.50
Economic Entomology. J. B. Smith. 481 pages.	\$2.50
Fruit Diseases. Hesler and Whetzel. 460 pages.	\$3.00
Fungous Diseases of Plants. B. M. Duggar.	\$3.25
Insect Pests of Farm, Garden and Orchard. E. D. Sanderson	\$3.50
Insects and Insecticides. C. M. Weed.	\$1.75
Insects Injurious to Fruits. Wm. Saunders. 445 illustrations	\$2.00
Practical Tree Repair. Albert Peets.	\$2.50

SOILS, FERTILIZERS, MANURES

Soils. C. W. Burkett. 300 pages.	\$1.75
Physical Properties of Soil. McCall.	\$0.90
Soil Management. F. H. King.	\$2.00
Right Use of Lime in Soil. Alva Agee.	\$1.25
Principles of Soil Fertility. Vivian.	\$1.40
Farm Manures. Chas. E. Thorne.	\$2.00
Talks On Manures. Joseph Harris.	\$2.00
Fertilizers. Source, character and composition. Voorhees	\$2.50
Soil Alkali. Origin and Treatment. F. S. Harris.	\$2.50

For information on Spraying, Diseases of Trees and Plants, and all kindred subjects, write your State Agricultural Department, or Experiment Station, or Department of Agriculture, Washington, D. C., for bulletins on these subjects. They will be furnished to you free of charge and will give you the latest and best information. The National Government and most all the states maintain a department devoted to horticultural interests, and their information on spraying, diseases of trees and plants, etc., is the best to be had.

Send your name to Superintendent of Documents, Government Printing Office, Washington, D. C., with the request that your name be placed upon their mailing list for the Department of Agriculture "Monthly List of Publications." This list will not cost you anything and will give and describe all the Government Publications as they come out. From such a list you can request any of the bulletins.



APPLES

(See page 31 for prices on trees)

IT IS a mistaken idea that apples cannot be grown in the South, especially in North and Central Texas, Kansas, Oklahoma, Arkansas, New Mexico and other parts of the Southwest. Only the RIGHT varieties must be selected. After trying out many varieties, we find the following list is well adapted for the Southwest. You will note that we have not included Baldwin, Northern Spy, McIntosh, Rhode Island Greening, and many other varieties that are the leaders in the North and East, because they are not adapted.

Apples will grow upon any good loamy land that is well drained, and hill sides are often the best locations. Any land that produces corn successfully will grow apples. Plant from 20 to 30 feet apart.

For cultural information we suggest the following books:

"The American Apple Orchard" by F. A. Vaughn.

"The Apple" by Albert E. Wilkinson.

The Chapter on apples in "American Fruit Culturist" by J. J. Thomas.

Prices of these and other books on page 1 of this catalog.

The varieties here described are mentioned in their order of ripening.

EARLY SUMMER VARIETIES

Early Harvest. Medium, bright straw-yellow. Tender flesh, sub-acid. Fine eating and cooking apple. Good for local market but rather tender for shipping.

Red June. Tree slow grower but bears young. Small to medium size; bright red skin; flesh tart and quality good. Fine table and market; best shipper of extra early varieties.

Fanny. Vigorous and productive. Large, Red, with flattened ends. Most excellent quality for eating and cooking. Well adapted for North Texas, where it originated.

San Jacinto. This variety first came to notice at Pilot Point, Texas, some thirty years ago in the orchard of the late Dr. Ragland. It is like an enormously large Red June, of same shape and color. Ripens just after Red June. Of best quality and fine keeper for an early ripening variety. This variety has become very popular and is regarded as one of the best varieties in North Texas, New Mexico, and Southern Kansas. This season we have a nice block of fine three-year-old trees in addition to the regular one and two-year sizes. See price list.

MID SUMMER VARIETIES

Bledsoe. Originated and grown extensively for many years by Judge Bledsoe, formerly of Sherman, and orchardist of note, has proved to be an apple of great merit for the Southwest, and later, over a wide range, especially so in the high, western plateau. It is large, roundish oval, sometimes angular, greenish striped and splashed with red; flesh white, sub-acid, good. Tree very vigorous and prolific. August and later.

Jonathan. Of American origin. Medium, if thinned on the tree grows larger. Roundish

conical, rich bright red on light yellow ground, few minute white dots; flesh yellowish white, tender, juicy, sprightly, sub-acid, a standard of excellence in market apples. Tree has a drooping, pendant habit; very productive, and requires rich soil. Universally popular. Should be gathered in August and stored to obtain best results.

Texas Red. One of the most highly esteemed apples in East Texas; large, solid red; fine; excellent keeper.

FALL AND LATE VARIETIES

Ben Davis. Tree healthy, vigorous, an abundant bearer; fruit large, handsome, striped; flesh whitish, tender, juicy, sub-acid, only fair in quality. Popular on account of its good bearing quality.

Stayman's. (Stayman's Winesap.) Medium to large; oblate, conical; greenish yellow, mostly covered and indistinctly splashed and mixed with dull dark red, with numerous medium gray dots; flesh yellow, firm, tender, juicy, mildly sub-acid, aromatic; quality best. Another seedling of Winesap originated in Kansas; is much larger, more beautiful in color and better in quality and equal or better keeper.

Delicious. Of peculiar and distinctive shape; brilliant dark red, shading off to golden yellow at the blossom end; flesh fine grained, juicy, crisp and melting; flavor sweet, with a slight acid taste. Tree vigorous, thrifty and a good, dependable cropper.

Gano. Similar to Ben Davis, but deeper in color, and better in quality. Tree very hardy and vigorous. A rapid grower. An early, annual and prolific bearer. A valuable late winter apple.

Arkansas Black. Vigorous, abundant; dark red, medium; excellent market; seedling of Winesap.

Kinnaird. Strong, spreading tree, prolific; red large; a superb Southern winter apple; the best of all winesap seedlings. Flesh pale yellow, crisp, fine grained; of fine quality. Tree longest lived of all varieties tested with us; originated in Tennessee.

Arkansas. (Mammoth Black Twig; Paragon.) Size large, roundish, slightly flattened; color a dark mottled red; flesh yellow, fine grained,

with a mild, pleasant, sub-acid flavor. Tree a strong grower and abundant bearer. Large fruit and better tree than Winesap, of which it is a seedling.

Winesap. Medium; roundish conical form; mostly covered with red, on yellow ground; flesh fine, crisp, with a rich, high flavor. One of the best for market, dessert, or for general winter use.

Crab Apple

Hyslop. Medium in size, very bright red skin. Delicious for jelly and preserves.

Whitney. Large, striped, not so juicy as Hyslop but better for eating.

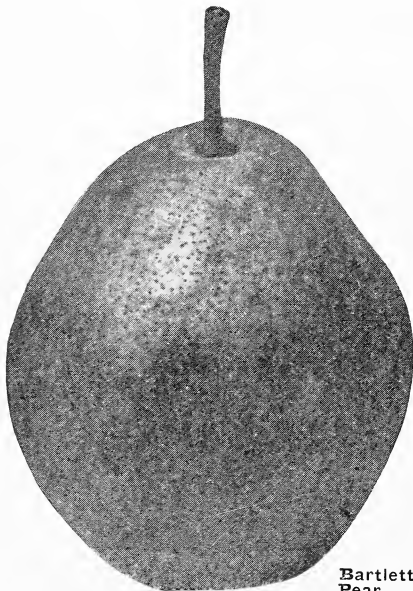
PEARS

(Prices on page 31)

WE do not carry a large variety list of pears, as many, while of extra fine quality, are more or less subject to blight. So we have cut our list down to the real successful varieties. Pears do well on a variety of soils—clay loam, sandy, gravelly and red soil. The soil must not be wet, should be drained, if not naturally drained. The knife is the best remedy for blight. Keep it cut off as fast as it appears. Cut back 3 or 4 inches below where the twig or limb has blighted. Keep this up from time to time as the blight appears, and you can keep it down. We have found here and there that there is less blight where the trees are not cultivated after the second year, but weeds kept mown off. Plant 20 feet apart each way, requiring 110 trees per acre.

Bartlett. Large, clear, bright yellow, with blush on sunny side, oblong shape, tapering gradually toward stem end. Flesh white, buttery and rich, juicy.

Garber. A hybrid of the Chinese Sand Pear, with one of the fine French varieties. Ripens a month earlier in season than Kieffer; round, with smooth skin. Will ripen fairly well on the tree and is ready for eating at picking time.



Bartlett
Pear

Kieffer. A most successful grower for the Southwest. Tree vigorous and very prolific. Bears young. Of supposed Chinese Sand Pear and Bartlett hybrid. Size very large, very handsome, skin yellow, with bright vermillion cheek. Does not ripen to perfection on tree, but if picked when skin shows trace of yellow it will ripen to perfection, making a very juicy, delicious pear with a musk aroma.

APRICOTS

(Prices on page 31)

APRICOTS are not a successful commercial fruit in North or Central Texas on account of their tendency to early blooming; but when they do set a crop, there is no nicer fruit. In West Texas, New Mexico, and on high grounds they are more successful in setting crops. While the fruit is smaller in the Cluster and Nellie they are more hardy in flower here than the Moorpark or Royal which have larger and more showy fruit. Apricots succeed best in semi-lime soils, and good rich sandy loam with clay subsoil. Cultural methods the same as for peach. Apricots ripen here in May and Early June.

Nellie. One of a selection of varieties discovered in Mexico by late Gilbert Onderdonk and sent to this country through the U. S. Department of Agriculture. Medium size, good quality, and one of the most sure bearers of any apricot.

Cluster. This variety originated in Texas several years ago from seed of the Russian apricot. Medium size, good quality. In Central West Texas it is claimed it never misses setting a crop. Here it sets better than the average apricot though it misses some seasons.

Superb. A variety better adapted in Ozark section of the United States. Large, best quality, late season.

Moorpark. Large, yellowish green with brownish red on sunny side, marked with numerous dark specks, flesh bright orange, parts readily from the seed; grown largely for commercial purposes, in those sections adapted for apricots, especially for canning and evaporating.

Royal. European, large, slightly oval, dull yellow with red next the sun, flesh orange yellow with rich, vinous flavor. An important commercial variety.

FIGS

LIKE a rich garden soil. Hardy in South Texas. In North Texas unprotected tops will sometimes winter-kill. Cut off all frozen tops, new shoots will come and bear fruit late in same season.

Magnolia. The most popular and successful fig in Texas. Bears younger than any other variety, second year after setting and same season on new shoots that come up afterwards. Medium size, of amber skin, of best quality. Fine for eating and preserves.

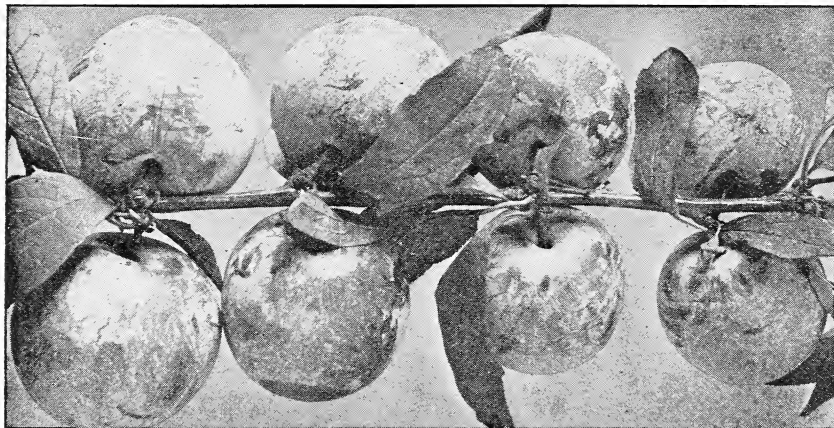
Calvert. White flesh, greenish skin when ripe. Delicious. Similar to Green Ischia.

Allison. Found in yard of J. T. Allison of Milan County, and claimed as never failing.

QUINCES

IN the South Quinces are not planted for commercial purposes. They require deep rich soil and three years time to bear. Plant 12 feet apart.

We only grow one variety, **The Meech**, large and fine and best of any for growth of tree and quality of fruit.



PLUMS

(Prices on page 31)

WHILE Plums like good soil, they will succeed on thinner land than the peach. In a combination orchard, plant the plums on the higher land if on a slope, follow with peaches, then apple and pear. Plant plum trees 18 to 20 feet apart, requiring 100 to 135 trees per acre. See list of books on Plum Culture on page 2. To prevent curculio, spray with Arsenate of Lead.

Varieties named in order of ripening.

May Beauty. A hybrid of Abundance with some Chichasaw variety. Tree spreading, heavy cropper. Fruit bright red, medium size, ripening and coloring uniformly all over. Ripe here May 20th.

Munson. A variety originated by W. B. Richardson of Lukkin from seed of the Normand and crossed with America or some similar variety. It is a very large yellow plum, juicy, and when full ripe has tinge of pink in the skin. Tree is spreading and sets very full every year. Our trees have never failed. Its size and color makes it a very showy plum, both on the tree and in the basket. While it ripens early, it blooms late thus escaping freezes that kill the earlier blooming varieties. In quality it is of the best.

Endicott. Medium size, pale pinkish in color, flattened at both ends. Very sweet. Tree upright and smooth without thorns.

Schattenburg. A variety from among the many originated by late G. A. Schattenberg but never introduced heretofore. He sent us several of his hybrids at time his health began to fail, and asked us to fruit them and if any proved of merit to introduce them. It is large, red, similar to Red June but larger, and inclined to be heart shaped.

Milton. Dark bright red all over, medium to large in size. Juicy. Tree productive. Of the Wild Goose type but much better color.

Abundance. Medium if allowed to mature as the fruit sets on tree, but large when fruit is properly thinned. As this variety is inclined to overbear, it is best that the fruit be thinned by taking at least one-half to two-thirds the fruit off when size of small marbles; the remaining fruit will be of extra size to more than make the same yield. Roundish, skin yellow, washed with purple with a bloom; flesh yellow, juicy, subacid with apricot flavor, quality superb.

Gonzales. Fruit very large, meaty, of brilliant red; finest of flavor; good shipper and keeper. Tree very strong and immensely productive. Very valuable.

America. A hybrid of Robinson with Abundance. Tree very thrifty, symmetrical, spreading; fruit medium to large, bright golden ground with pink cheek, dotted white; flesh firm, stone medium to large, cling. Considered one of Burbank's best productions. Very valuable.

Burbank. Large; clear purplish red; flesh deep yellow; very sweet and agreeable flavor. Very prolific.

Minco. Seedling of Wayland pollinated by Miner. Tree very vigorous, free from disease. Fruit large, red, very late. This is one of the best late plums, fine for jellies, preserves, etc. Very rarely injured by late frosts.

Satsuma. A Japan variety. Tree upright. Fruit large round, dark purple skin, with intense blood red flesh. Fine for fancy preserves.

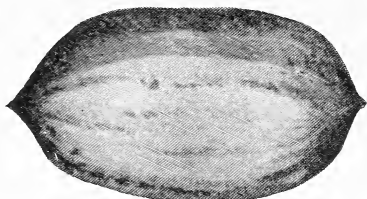
Gold. A variety that is becoming quite popular in the Southwest owing to its good tree and reliable bearing qualities. Large, yellow skin with light yellow flesh, round.

"Yellow Iowa" or "Try Me". An unknown variety, possibly a seedling that came in a lot of trees received by a neighbor as a subscription premium. Large, slightly heart-shaped, yellow skin and flesh of best quality.

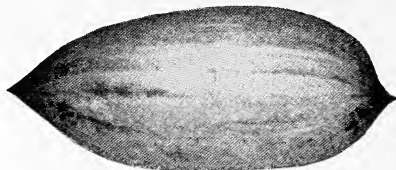
Ward. Of the Americana type, medium size, red, peculiar distinctive flavor of the wild plum. Ripens in September. Fine for jellies and comes after all other plums are gone.

Cherry-Plum

Compass. This is a hybrid of a plum and cherry. In size larger than the largest cherry but rather a small plum. Shape of plum with cherry quality. It will succeed where the true cherries will not and thus afford one with the best possible substitute for the cherry. The tree is vigorous, bears young. The fruit is red, rather tart. Fine for jellies and preserves. Ripens early in June.



Delmas Pecan



Moneymaker Pecan

PECAN TREES

See page 2 for books on Pecans and Nut Culture.

PECANS are commonly considered hard to transplant. We find the difficulty is slight, if the tops are cut back leaving only three or four eyes or buds above the point of the bud or graft which can be told by a slight off-set on the body of the tree. Plant trees two to four inches deeper than they stood in nursery, according to size of trees, which are usually one to six feet tall. Dig holes at least two feet square and deep, and then put down a post hole in center of large hole one to two feet deeper, or as deep as may be necessary to hold the long root.

After trees are set and well watered, mound dry soil on stem of tree a foot or more above level of ground, or even to top of the stem or trunk, after it has been cut back, as directed above. Leave a ditch around this mound to hold sufficient water to soak down to end of root. New growth will come through the mound of soil in the spring or summer, and the soil will work down gradually to a level.

Time of Bearing

The time of bearing depends upon the care given and the method of fertilizing. It is better to have the tree make a good, sturdy growth and attain fair size before it bears, then the method of care should be changed so as to produce short twigs upon which the nut clusters are borne. This can be done by decreasing the amount of nitrogen and adding phosphate.

You will usually find a few nuts on some of the trees any time after the third year, but a profitable crop will not often be borne before the tenth year. From that time on the increase is rapid.



Stuart Pecan

That pecans do bear heavily and quite regularly is well known by those who are closely watching their own orchards or the industry.

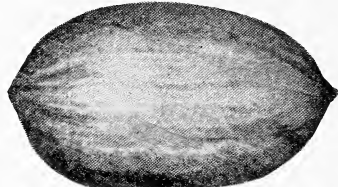
It is better to plant three or four varieties in an orchard. This is an aid in cross-pollenizing. Change the variety every third or fourth row, or tree, where only a few are planted.

Delmas. Nut large, shell moderately thin; quality very good, flavor excellent. Tree quite vigorous. Quite successful in Central to North Texas.

Schlev. One of the best nuts grown on the coast and very successful inland. Nut very large, shell very thin. The meat readily cracks out whole.

Success. Large. Moderately thin shell. Kernel plump. Quality rich, flavor very good.

Stuart. Nuts large or very large, $1\frac{1}{4}$ to 2 inches long, oblong with brownish shell, strongly marked with dark color. Shell of medium thickness and of very good cracking quality. Kernel full, plump, bright colored. In quality one of the best, the flavor being rich and sweet. A heavy bearer. Tree a strong grower, reaching an immense size, with large foliage.



Success Pecan

Van Deman. Large to very large, from $1\frac{1}{4}$ to $2\frac{1}{4}$ inches long, rather slender, pointed at both ends. Color reddish brown with purplish markings. Shell of medium thickness; cracking quality excellent. Kernel full and plump, bright brownish yellow; flavor sweet and good. Tree is vigorous, healthy, with large bright foliage. Altogether one of the most desirable varieties.

Moneymaker. A variety adapted over a large range. Medium in size, about $1\frac{1}{2}$ inches long, tapering at both ends. Bears young, and generally a sure cropper.

MULBERRIES

MULBERRIES flourish in any soil or situation. If space is given the trees they make fine individual specimens. They make fine trees for the poultry yard, as the fowls will eat all the fruit that falls from the trees so none will go to waste.

Black English. The variety having the largest berries, black and fine for pies.

Munson. One of the largest, most prolific and best mulberries of the Russian class. Originated by us, selected from among thousands of varieties grown from seed. The branches in fruit look like ropes of big berries. Earlier than Hicks.

Hicks Everbearing. Profuse bearer of fruit for three months; fine grower for shade; the best of all trees for the fowl yard, as the fowls greedily eat the berries.

Male Russian Mulberry. The flowers on this tree are nearly staminate but have rudimentary pistil, which sometimes metamorphoses and will set insignificant fruit, especially first season or two after transplanting, but after tree recovers from check of transplanting and gets into full growth, rarely any fruit sets. What fruit does set does not begin to compare in size and productiveness to the regular bearing sorts. This variety does not sprout like the non-fruiting Paper Mulberry. This has a round head of compact form, well filled with leaves. The trees we grow are grafted, the same as the fruiting sorts.

CHERRIES

REQUIRE very best drouth-resisting soil. Peculiarly adapted in the South for planting in back yard of town lots, as they succeed better in such situations than in orchard planting. In Oklahoma and northward they are successful for orchard planting. They like the slightly limy soils better than the sandy soils, and do quite well on mixed soils. Plant 18 to 20 feet apart.

We grow only varieties of the Duke and Morello class (Sour Cherries), as they are the only classes that will succeed in this part of the South. The Sweet Cherries (Hearts and Bigarreus) are not successful here.

Early Richmond. Light pinkish red, medium size, round. Successful over a greater range of country than almost any other variety.

New Century. Thought to be a combination of the Duke and Morello types. Originated in Grayson County, Texas. Fruit medium to large, light red, of fair quality. Tree strong, upright, foliage rather broad, and free from mildew.

English Morello. Latest to ripen of the sour cherries. Very dark red, size small. Hangs on tree well after ripening. Tree dwarfish.

Japanese Persimmons

THESE were introduced from Japan about seventy years ago. They are the royal fruit of Japan, their best native pomological product. Leaves are broad and burnished, the trees very from shrubby growth of eight to ten feet high to a much larger size in different variety. Usually very prolific, often bearing at three years of age.

The following are the best Japanese varieties and all hardy here: **Costata**, **Hyakume**, **Hyachia**, **Triumph**, **Okame** and **Dia Dia Maru**. If no particular variety is wanted, just order Japan Persimmon and we will send best assortment.

These should be cut back as directed for pecans, leaving about three good eyes or buds above the graft. Plant trees slightly deeper than they stood in nursery, and mound soil up on stem, the same as for pecans.

American Persimmons

Josephine. This is one of the best American sorts. Larger in size than the ordinary Native persimmon and of the best quality. We can supply trees of this grafted upon the Native roots. Also have Seedlings of this which will be similar to mother tree, though the seedling will vary and be some male trees which cannot be determined until trees begin to bloom. However, male trees are necessary in case there are none in the neighborhood.

Cultural Note. Many fail to get satisfactory results in the transplanting of the pecan and persimmon, because they do not plant the trees in the right manner. Both the persimmon and pecan have long straight tap roots, with few or no side roots and almost no fibrous roots; so it is difficult for such roots to get a hold of the soil unless one takes care and plants the tree in the right manner. A hole should be dug at least three feet deep; a post-hole digger is a good tool to use. Set the tree so that the entire root is under ground. (One great fault is that some leave two to five inches of the root above the surface.) Then fill in with nice, moist, pulverized soil and tamp same so that the soil is forced into the pores of the bark of the root, being careful not to bruise the root while thus tamping. After the hole is thus filled up, then mound up about the tree with a mound of earth about a foot high and two feet across. This mound will gradually work away by cultivation. Then be sure and keep the tree cultivated all summer. If a post-hole digger is used, it would be well to spade up the ground about 8 inches deep in a radius of three feet around the tree before the mound is made.



Japanese
Persimmon

OYAMA PLANT FOOD

A WONDERFUL JAPANESE DISCOVERY



MAKES PLANTS THRIVE

By using OYAMA on house plants it will keep them in bloom all winter and as green and luxuriant as if grown outdoors in the summer. IT WILL MAKE YOUR FLOWER AND VEGETABLE GARDEN WONDERFULLY PRODUCTIVE and the envy of your neighbors.

It makes no difference how healthy or delicate your plants may be, OYAMA WILL BRING OUT NEW FLOWERS AND FOLIAGE and cause a marvelous transformation.

Contains no bone, fish scraps or manure.

FOOD FOR PLANTS-FLOWERS-VEGETABLES CLEAN-ODORLESS-SAFE TO USE

OYAMA is fine for all kinds of plants, ferns, shrubs, roses, bulbs, lawns, berries, fruits and flowers. Gives seedlings a wonderful start and PRODUCES EARLY VEGETABLES.

OYAMA contains 17% nitrogen. It keeps the soil rich but odorless. Highly concentrated, easily applied and economical to use. NEVER FAILS TO PRODUCE WONDERFUL RESULTS.

Full directions with every package.

	PRICE
House Plant Size, makes 6 gallons.....	\$.30
Garden Size, " 32 ".....	1.10



A plate of Carman Peaches

PEACHES

Directions for Cultivating. A sandy loam is best suited to the Peach, but it will adapt itself to almost any soil, provided it is well drained. Plant one-year-old trees 18x18 feet; cut the tree back to 18 to 24 inches, as it is always best to have a low-headed tree. In the spring, after the growth has started, remove all but three branches and let these be distributed so that the tree will be well balanced. For the first two years fertilize with well-decomposed barnyard manure, or a mixture of one part of cotton seed or bone meal to two parts of acid phosphate. Apply $1\frac{1}{2}$ to 2 pounds to each tree. After the third year, avoid nitrogenous fertilizers and use a fertilizer containing a good percentage of bone phosphate and potash and a small percentage of nitrogen. Prune every year by cutting off one-third of the previous year's growth. The head of the tree should be broad and open, so as to allow free circulation of light and air.

Borers. Go through your orchard in March and where you find gum around the surface, clean away the dirt and, with a knife or some sharp-pointed instrument, follow up the borers and remove them, then throw around the tree a small quantity of lime and ashes. This plan, if rigidly enforced, will keep borers down, give you better fruit, and greatly extend the life of the trees.

There is a preparation now made that is claimed to kill borers, and is so recommended by the U. S. Department of Agriculture in Bulletin No. 796. It is sold under the name of "KRYSTAL GAS."

Thinning. When a tree sets an overload, it pays to thin out the fruit, even if two-thirds of the crop has to be taken off. It relieves the tree, and the remaining fruit will grow to be large, fine flavored, and handsome, whereas if the tree is left overloaded, the fruit will be small, inferior, of poor flavor. The thinning should be done just when the young fruit is about the size of marbles, and thinned out so that the peaches will not be less than 3 to 4 inches apart on the tree. The extra price for the thinned fruit will more than pay for the fruit destroyed.

To prevent wormy peaches; spray with arsenate of lead.

To prevent brown and other rots, spray with lime-sulphur.

To eradicate San Jose and other scales, spray with lime-sulphur solutions, or scalecide.

For good books on The Peach and Its Culture, see page 2.

The varieties are named as near in order of ripening as possible. Dates mentioned are for North Texas. They will be from four to six days earlier for each 100 miles Southward, and same ratio later for corresponding distances North.

(Stubenrauch varieties in separate list, see page 10.)

JUNE 1st OR EARLIER

Mayflower. The earliest of all peaches. Medium size, red skin all over, white flesh. Considering its extreme earliness the quality is very good; much better than the old Alexander. Originated in North Carolina.

FIRST PART OF JUNE

Early Wheeler. Originated in Collin County, Texas. A large showy white cling, with red cheek. Very firm, of fair quality. It is valuable as a variety to reach distance markets as it is as good a shipper as any of the later ripening varieties, and its uniform large size and showy skin makes it a most attractive market variety.

Red Bird Cling. Although of a different origin than the Early Wheeler, it is almost identical with it in size, color, and shipping qualities.

Yellow Swan. Originated in Smith County, Texas. Large, yellow freestone, skin yellow with bright crimson cheeks. Quality the best of its season, and largest of its season. Carries to market well. Almost identical with Arp Beauty.

Early Rose Cling. White cling, with red in flesh under the skin. Very sweet and juicy. Prolific and sure.

LATTER PART OF JUNE

Mamie Ross. Originated in Dallas County, Texas. A very successful and sure bearing variety, very prolific. Large, white with cream blush on one side. White flesh, semi-cling.

Early Elberta. Rich yellow skin, with red cheeks giving a rich effect. The quality is of the best, in fact superior to Elberta. It does not contain blood of the Elberta, but its quality and color indicate a mixture of some Crawford or St. John blood. It is very prolific and sure. There are other early freestone varieties of yellow flesh called Early Elberta, but the type we have is superior to any, and we know will please.

Grimes. A white clingstone of extra large size. Originated in Anderson County, Texas. Quality good, very juicy.

Carman. Originated in Limestone County, Texas. Has become a nationally famed variety. White flesh, semi-cling. Very sure and prolific. Skin white, with blush over two-thirds of surface. In appearance like a highly colored Mamie Ross but later in season.

Slappy. Originated in Georgia. A yellow freestone of the highest quality. Rather shy in bearing but this fault is made up in the rich buttery eating quality. Skin lemon-yellow more than half covered with crimson.

Dr. Burton. (Dr. E. L. Burton, Grayson County, Texas.) Very vigorous and prolific. Small tit with sharp apex. Skin rather fuzzy, clear light creamy, mostly covered with pinkish red in dots, pencilings and blushes; brighter and more attractive than Mamie Ross. Flesh white, streaked with pink, much firmer and better in quality than Mamie Ross.

FIRST PART OF JULY

Hiley (Hiley Belle). This is an extra fine peach of a true freestone type of white flesh. Skin white with red on one side. Shape slightly longer than round. Of best quality and flesh inside has a crispness much desired. Sure and prolific.

Champion. A large white-flesh freestone of exceptionally good quality. A fine variety for home or home market but not a good shipper for distant market.

Belle of Georgia. Large size, white, freestone. A good mate in a white variety for the Elberta in the yellow. Of finer quality than Elberta and a good shipper.

J. H. Hale. A large yellow freestone of fine quality, coming in before Elberta. Round and not pointed like Elberta. Originated in Georgia and doing well over the South.

LATE JULY AND EARLY AUGUST

Elberta. Originated in Georgia. Well known for its regular bearing of large crops of large size peaches. The size, however, dependent upon the soil, as are all varieties. In good, well prepared soil and when thinned, you get a fine crop of extra fine show peaches, but if tree overbears and on thin soil, the size and appearance are accordingly lowered. Flesh yellow, freestone, large in size and of good quality while not the richest. A standard for shipping and canning.

Chinese Cling. (Originated from seed brought from Shanghai, China.) Spreading habit, healthy, not very prolific. Probably the largest peach in cultivation. Skin creamy with short fuzz, mottlings of dull red covering one-third to one-half of surface next stem. Flesh white with little red at seed, tender, very juicy, sprightly sub-acid. It is the parent of more fine commercial varieties than any other peach in cultivation, and yet not a valuable commercial variety itself.

Sylphide Cling. A very prolific white clingstone. Very sweet and juicy of best quality. Medium to large in size.

Munson Cling. A seedling of Elberta originated by us. Of best quality. Very large, much larger than Elberta. Yellow, firm flesh, cling.

Bequett Free. A large, fine, round freestone. White of best quality.

LATE AUGUST

Gold Dust. (J. C. Evans, Mo.) Prolific. Tit small. Skin quite fuzzy, orange, mostly covered with bright crimson, handsome. Flesh orange, very firm, a little red at stone, best quality cling. Very pretty.

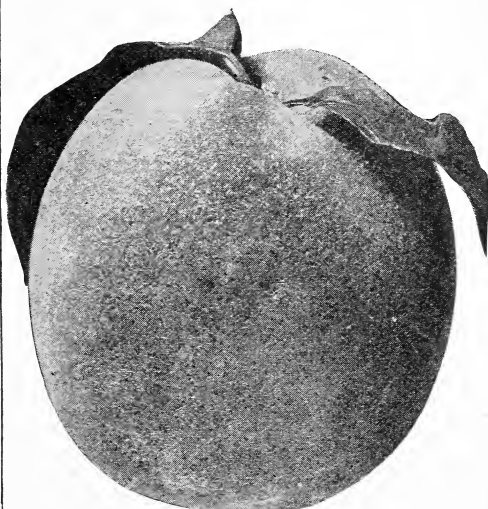
Mathew Beauty. Large light colored yellow, of best buttery flavor. Skin yellow ground with red cheek, making it a very handsome appearing peach. Freestone.

Old Mixon Cling. Medium to large size, white cling with blush cheek. Flesh firm, good quality, sure bearer.

Lady Lindsey. A seedling that came up in the yard of Mrs. George Lindsey of Greenville, Texas, and brought to our attention by L. L. Bowman of same place. Very large and attractive, having a rich red skin underlaid with yellow. Flesh of golden yellow, juicy and of fine quality. It ripens after the Munson Cling and before the Henrietta, filling in the gap between these two excellent clingstones, making a fine trio of yellow clingstone peaches. The tree is a good bearer.

SEPTEMBER AND LATER

Salway. Brought from England many years ago. A yellow freestone of best quality, and fine for canning. Skin rich yellow covered with red.

**Salway Peach**

Henrietta. A most attractive yellow clingstone. Skin rich yellow with red cheek. Quality of the best. Fine for eating and for sweet pickles.

Indian Cling. Has mottled brown reddish skin, flesh white with red streaks. Juicy, and fine for sweet pickles.

The Stubenrauch Peaches

(For prices of trees see page 31).

IT is with a great satisfaction to us to offer several of Mr. Stubenrauch's Originations in Peaches. We know it will add to our reputation all ready gained for introducing varieties of only proved merit. Many know of these productions by reading of them in the Horticultural Press, especially the Farm and Ranch, which at different times during the past few years have full page accounts to these new varieties of Mr. Stubenrauch's productions.

The proprietor of the Munson Nurseries visited the Orchards of Mr. Stubenrauch in the summer of 1923, for the purpose of selecting three or four of his best varieties to propagate and introduce. But it was a hard choice as so many had so many good points, no one could stop with three or four varieties. So after careful selection, buds of TEN of his best varieties were taken direct from this orchard. So the trees we are offering are propagated direct from the bearing trees in the Stubenrauch orchard.

Before describing each variety, a general history and description is given which will apply to all the varieties. We cannot better do this than to quote from a letter written to us by Mr. Stubenrauch, as follows:

"Growing fine peaches has been with me almost a lifetime hobby. I started my first peach orchard in Texas (right where I am now), in the late 70's. Had at one time over 100 distinct varieties in bearing.

"Out of these but few possessed real merit and general value. After experimenting for a number of years with the best of those of early days, shipping them to different markets, etc., the fact became clear that unless we got more reliable bearers and get the fruit to ripen after the usual early summer glut, the business would never be a paying one. I loved the work too well to quit, and yet to keep on the way I was going would land me eventually at the poor farm. As 'necessity is the mother of invention,' in my case something had to be invented or else go back to raising cotton.

"Among a lot of Elberta trees along the early 90's, there was one tree superior to all the rest, growing finer fruit, more of it, and producing more regular than the average of them. The thought occurred to me then, 'Why not cross pollenate this better type with some fine later peaches, and thus get some fine seedlings that ripen intermediate?' The work was started by planting some healthy Indian seedling peaches into which were inserted buds from that fine Elberta, and buds from Bells October, a very fine high quality late yellow freestone. When these fruited the seeds from the finest specimens were planted, and when these seedlings came into fruit many of them produced fruit superior in their makeup of both parents, the large size and fine appearance of the Elberta blending with the high quality in color and flavor of the Bells October. By selecting a dozen of the best were able to cover the entire season from Elberta to September in Central Texas."

The varieties are described in their order of ripening.

Tena. This is the first of the lot to ripen, being a week to 10 days in advance of Elberta. Color a brighter red and yellow than the Elberta with quality much better. It is a cross of Mamie Ross with Elberta. It blooms late with Mamie Ross and rarely injured by cold. It is a high class yellow freestone.

Liberty. Is a large handsome yellow cling. A cross of a selected superior Elberta with Bell October. (Bell October is a handsome large yellow freestone ripening late in September, and contains some Indian blood.) Full of red juice of best quality. Ripens close after the Tena.

Frank. Has already made quite a record as many have testified. It was first introduced by us in fall of 1915. Begins to ripen as Elberta is passing out, about August 10th in Central Texas and August 20th in North Texas. The past summer makes its twentieth year it has fruited without a miss in the Stubenrauch orchard. It is a rich yellow and red cling, above medium in size, of very fine eating quality. In shape and color it resembles its mother parent, the Belle October.

Lizzie. Closely follows the Frank in ripening, and a full sister to it, but a freestone, yellow flesh, of high quality and of large size.

Emile Cling. A seedling of the Frank. Will average larger in size, the yellow skin almost entirely covered with red. Flesh yellow, juicy, of fine quality. Begins to ripen just as the last fruit of Frank is gone.

Stubenrauch North Row No. 15. Another Frank seedling, equally productive and certain. A yellow cling. Round, and larger than Frank, with beautiful red cheek.

Barbara. A freestone ripening with the two clingstones. Emile and No. 15. Barbara was

introduced by us in fall 1916. It is a Bell October and Elberta cross. Round, large. Excellent quality, extra fine for canning. A fine grower and immense producer. A fifteen year old tree in the Stubenrauch orchard has a spread of limbs of 37 feet, and has borne ten bushel crops at several different times.

Katie. Can well be called the September Elberta on account of its large size and shape similar to Elberta. It begins to start ripening as the Barbara passes out. Large size, yellow flesh, freestone, with yellow and red skin. Of best quality. Blooms late and rarely injured by frosts or winter colds. It is an Elberta and Bell October cross.

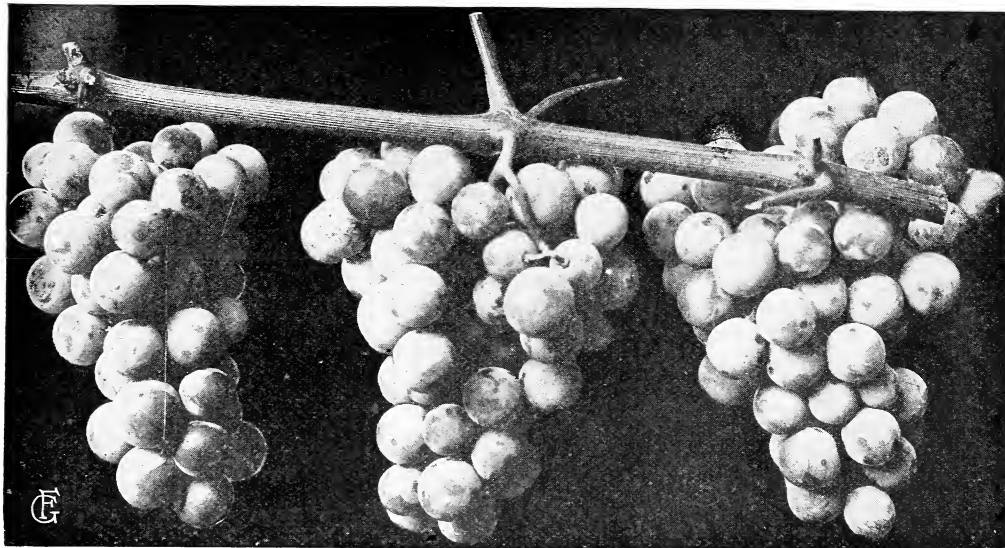
Fredericka. One of the younger generation originations of the Stubenrauch productions. A fine companion for Katie. A large yellow-freestone of very fine flavor. Skin yellow and red of high color.

Golden Chinese Cling.

Golden Chinese Free.

Both of these are seedlings of Lucille which is a full sister to Frank. Of very large size, yellow and red skin. Round with slightly pointed tits. Both begin to ripen as Katie goes out, making a fine pair of varieties to close up the peach season.

By planting out an orchard of the above varieties, one will have a succession of the most sure cropping varieties as well as fine flavored and handsome peaches ripening from July 20th to last of September. By adding some of the earlier varieties such as Mayflower, Early Rose, Mamie Ross, Early Elberta and Carman, one then will have an orchard of best peaches from May until close of peach season.



President Grapes

GRAPES

We are known the world over for our Grapes.

The two books named below are the best on Grape Culture that have been published. The two books will make a complete library on Grapes. Other good books on Grapes and Grape Culture as listed on page 2.

A Manual of American Grape Growing.

By U. P. Hedrick.

Price, \$3.25.

Here is a book which covers the entire field of vineyard practice in this country.

It is a practical, concise handbook for grape growers of both the East and the West.

It embodies the results of the latest experiments in the control of disease and describes in detail the newest and most approved methods of cultivation, training and marketing.

Many books on grapes have been published, but none in recent years. "A Manual of American Grape Growing" is the most thoroughly up to date and complete book on the subject.

It is illustrated with 32 full-page plates, and with 54 figures which picture accurately the points made in the text.

Chapter I. The Domestication of the Grape; II, Grape Regions and Their Determinants; III, Propagation; IV, Stocks and Resistant Vines; V, The Vineyard and Its Management; VI, Fertilizers for Grapes; VII, Pruning the Grape in Eastern America; VIII, Training the Grape in Eastern America; IX, Grape-Pruning on the Pacific Coast; X, European Grapes in Eastern America; XI, Grapes Under Glass; XII, Grape Pests and Their Control; XIII, Marketing Grapes; XIV, Grape Products; XV, Grape Breeding; XVI, Miscellaneous; XVII, Grape Botany; XVIII, Varieties of Grapes.

Culture. We have prepared a pamphlet on the culture of grapes which is re-print of Chapter V and VI from "FOUNDATIONS OF AMERICAN GRAPE CULTURE," and consists of 20 pages. This pamphlet will be sent free to all of our customers purchasing grape vines to the amount of \$2 or more, if such is requested. If the pamphlet is desired, please so request it when sending in your order.

Foundations of American Grape Culture

By T. V. Munson, Denison, Texas.

Price, \$3.00.

The Best Work on Grapes Published in the United States.

This magnificent book is a monument that will perpetuate the memory of one who spent his noble life in the study of this fascinating subject, the Grape. It was indeed fortunate that the author put together in book form the results of his lifework. Had he delayed it five years longer from the date of its publication (1908) the world would have been the loser.

This work has taken its place as the best book on grape culture in America, as is evidenced by the many highly complimentary testimonials from men who stand high in the viticultural world, as well as botanists, vineyardists and amateur grape growers.

The book is strongly bound in buckram, with beautiful title on cover, embossed in gold. It is printed upon fine glazed paper, giving most beautiful, clear impressions of type and half-tone fullpage engravings, 90 in number, 252 pages in all, 7½x10 inches. The book contains 8 chapters upon the different divisions of the subject as follows: I, Botany of American Grapes; II, Breeding of Varieties of Grapes; III, Description of Varieties; IV, Adaptation of Varieties; V, How to Start a Vineyard, including trellising, pruning, training, etc.; VI, Protecting the Vineyard from Insects and Fungi; VII, Disposition of the Crop; VIII, The Grape for Home Adornment: Shade, Fruit and Health.

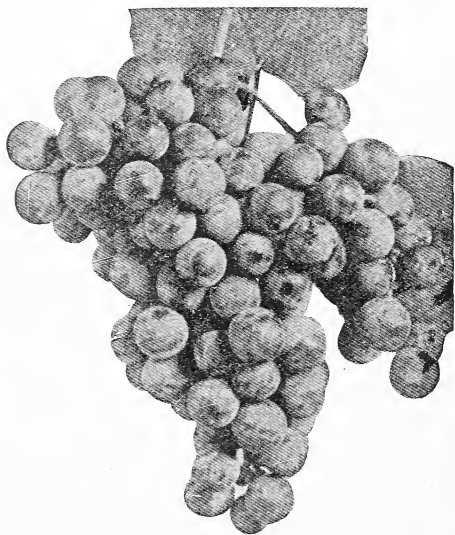
The two books above are so valuable, that we give the space for their announcement, so that every one may know of them, and every one interested in the subject of grapes should have both of these books. Other fine books on the Grape and Its Culture are listed in the inside front cover of this catalog.

Note—This will be the last opportunity to secure this book, and as we go to press, we have only 55 copies left in stock. No new editions will be published. Hence the book will soon be sought at a premium as soon as last copy is sold. We mention this for your information.

All bearing grapes have one of two kinds of flowers—both kinds are pistillate, but one has perfect stamens and will bear alone; the other has imperfect stamens and will require a perfect stamen variety blooming at the same time planted near to render the imperfect stamen variety fruitful. Some of the best varieties are those having imperfect stamens. In the following descriptions characters are given after the name of the variety which will indicate to the reader the kind of flower and date of flowering. So in selecting mates for the imperfect stamen kinds, select those varieties with perfect stamens, blooming within three days earlier or at same time. The perfect flowering kinds are indicated with (†) and the imperfect flowering with (*). In respect to date of blooming, A is for April and M is for May, and the figure following is the date as A9 means April 9th. The dates mentioned are for Denison for the average period of years. They will vary in other sections and vary from year to year in any place.

All the varieties possessing Post-Oak blood, in order to get best results in cropping, should be treated the same as Herbemont, that is, plant wide apart, as much as twelve to sixteen feet in the rows, and have long arm pruning. They do especially well upon the Munson Canopy Trellis mentioned in Foundations of American Grape Culture, page 224. Distance apart to plant are mentioned with each variety, just by mentioning the number of feet, as "8 feet." Those mentioned to be planted 8 feet should have SHORT ARM pruning, say 3 to 4 feet. Those mentioned to be planted 12 feet should have MEDIUM ARM pruning, say arms 4 to 6 feet long; and those mentioned to be planted 16 feet apart, should have LONG ARM pruning, say with arms 6 to 8 feet long. The distances mentioned are for the vines in the row. All rows can be uniformly 10 feet apart regardless of distance in the row. What is meant by Short, Medium and Long Arm pruning is fully described in FOUNDATIONS OF AMERICAN CULTURE.

Note—On sandy, loamy and mixed soils nearly all the varieties will succeed. But on very limy or black waxy soils only a limited number will succeed. Those varieties that succeed best in the limy soils are those we have bred from the native species, *Vitis Champini*. These are Lo-



Bailey Grape

Manto, Champanel, Valhalla, Lukafata, Ladano, Salamander, Nitodal and Sabinal. Also we find from reports these same Champini hybrids are about the only varieties that will succeed in the Lower Rio Grande Valley, where most other kinds suffer from root trouble that develops in that soil, unless grafted on resistant stocks.

DESCRIBED IN ORDER OF RIPENING

The varieties are named in the following descriptions in near the order in which they ripen as it is possible to do so. There is a variation from season to season.

(Many of the varieties are given fuller descriptions and have full-page illustrations in "FOUNDATIONS OF AMERICAN GRAPE CULTURE.")

(Prices on page 31.)

PERIOD I—LAST OF JUNE

Headlight. (*A19. 8 feet.) Hybrid of Moyer with Brilliant. Vine slender, but more robust than Delaware, and making much longer vines, less attacked by mildew, leaves resembling those of Brilliant, but not so large; clusters small to medium, very compact, shouldered; berries clear, dark red, globular, medium or above in size, very persistent. Skin thin, tough; pulp tender, very sweet, almost equal to Delaware in quality and the finest in quality of any American grape ripening so early. Seeds few. Well adapted to most any soil and in most parts of the United States. Illustrated on page 146, Foundations of American Grape Culture.

PERIOD II—JULY 1 TO 10

Brilliant. (†17. 8 feet.) (Lindley x Delaware.) Growth strong. Vine endures winters anywhere up to 15 degrees below zero. Clusters large, cylindrical, or somewhat conical, often shouldered, open to compact. Berries large, globular, light to dark red, translucent, with a thin bloom, very handsome when well ripened; skin thin, rather tender, but seldom cracks; pulp meaty, yet very tender, melting and delicious, usually preferred for table and eating fresh, to Delaware. Ripens just before the Delaware and yields on an average fully twice as much. It ships about equally as well or better than Concord.

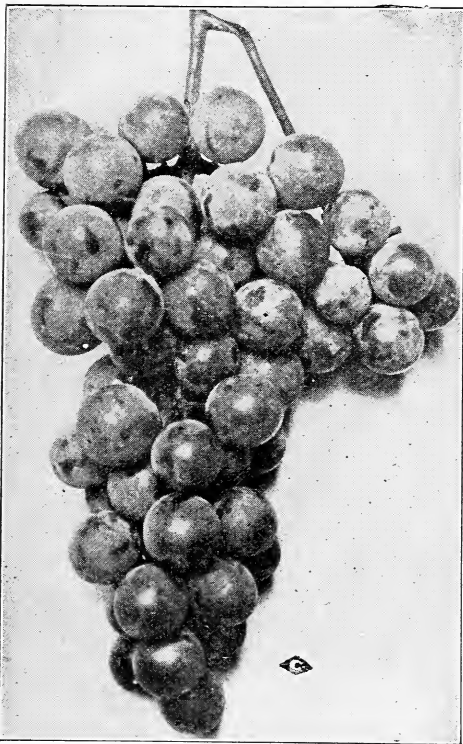
Manito. (*A20. 12 feet.) Hybrid of America and Brilliant. Growth very similar to America, endures extremes of climate very well. Clusters long, cylindrical, rather open, with long peduncle; flowers perfect, bears well alone, but better among other kinds blooming with it, very prolific; berries medium, globular, persistent, dark purple, with white specks; very distinct and unique in appearance; skin thin and tough, pulp very tender, juicy, sweet and agreeable, parting from the seeds with ease. Ripens very early, about with Moore Early, packs beautifully and ships excellently. A very profitable market grape, also a good wine grape. Adapted for general North and South.

Lomanto. (†A20. 12 feet.) Hybrid of Salado and Malaga. Vine vigorous, prolific, healthy, no rot nor mildew; leaf medium, having little pubescence; cluster above medium, conical, properly compact berry, very persistent, medium to large; spherical, dark purple or black, skin thin, tough; pulp melting, excellent quality; juice, claret red. Valuable for limy soils and hot climate.

PERIOD III—JULY 10 TO 20

Winchell. (†A17. 12 feet.) A well known Northern variety doing fairly well here. Large cluster and berry, good quality, and a fine showy white grape.

President. (†A18. 12 feet.) Pure seedling of Herbert. Has a much better vine, which is strong, healthy, and prolific. Flower perfect. Cluster, medium, compact; berry large, black, persistent, does not crack. Ripens with Moore's Early and of far more value in the South than that variety. Quality excellent, much better than Concord. Recommended for the latitude from Texas to 40 degrees north.



Fern Munson Grape

Captivator. (†A18. 12 feet.) A cross of Herbert with Meladel, that is a combination of Rogers No. 44, his best black grape, Delaware, Goethe, and Lindley. The growth is fairly vigorous. Very prolific. Cluster above medium, cylindrical. Berry large, round, very persistent of a beautiful bright translucent pinkish red. Skin thin, tough, without cracking. Pulp melting, of exceedingly delicious flavor, nothing superior.

Delaware. (†A20. 8 feet.) Originated in Ohio. Full historic description, page 143, Foundations of American Grape Culture, and illustrated on page 145, same book. Cluster medium, berry medium, bright red, juicy and of high quality. Succeeds well in the South. Does not rot, but needs spraying to ward off Downy Mildew.

Delakins. (†A20. (8 feet.) A cross of Delaware with Perkins, that is, a combination of Delaware, Goethe and Perkins. It has the robustness of Perkins, the handsome cluster of the Delaware, but larger, and the size and shape of the berry of the Perkins, with the bright red of the Delaware.

PERIOD III—JULY 10 TO 20

Ladano. (†M4. 12 feet.) Hybrid of Salado and Headlight. Vine vigorous, healthy, foliage similar to that of Headlight; cluster medium, compact; berry medium or above dark, clear purplish-red, translucent, round; skin thin, tough; pulp tender, melting, rich, pure and sweet; seeds few. Fine for hot climate and limy soils.

Rommel. (†A18. 8 feet.) Hybrid of Elvira and Triumph. Growth medium, endures climate better than Concord. Prolific. Slightly

attacked by mildew in wet sultry seasons, but less so than Delaware. Clusters medium to small, ovate or cylindrical, often shouldered, compact, peduncle short. Berries large, globular, persistent, greenish yellow when fully ripe, skin very thin and delicate, too tender for long shipment, carries well 50 to 100 miles; very profitable for a home market grape, as it is always in demand on account of its most agreeable and fine eating qualities. Pulp melting and perfectly delicious when well ripened, but acid when under-ripe.

Bell. (†A15. 12 feet.) A hybrid of Elvira with Delaware. Vine vigorous, healthy, free from mildew and leaf folder, very hardy, a good sure producer; cluster medium, cylindrical, often with a shoulder, fairly compact; berry medium, round, greenish, yellow, rarely attacked with Black Rot; skin thin, sufficiently tough to prevent cracking under ordinary weather changes; pulp rather tender, juicy, very sweet and agreeably flavored; ripens just before Concord.

Wapanuka. (†A22. 8 feet.) (Rommel x Brilliant.) Growth medium to strong, equal with Concord, less attacked by mildew than Brilliant. Clusters medium to large, cylindrical, shouldered, properly compact; peduncle short to medium. Berries large, five-eighths to seven-eighths inch in diameter, globular, persistent, rich yellowish white, translucent; skin very thin and delicate.

PERIOD IV—JULY 20 TO AUGUST 1

Nitodal. (†A23. 12 feet.) Salado hybridized with Malaga. Vine vigorous, healthy, cluster medium to large, conical, handsome; berry persistent, above medium, translucent, dark red; skin thin, never cracks; pulp melting, pure, fine; juice pale pink. Altogether very attractive and valuable, especially in limy soils and hot climate, and probably will succeed as far North as Missouri and Kentucky.

Salamander. (†M3. 12 feet.) A combination of Salado, Delaware, and Lindley. Vine very vigorous and healthy, enduring drouth perfectly and 15 degrees below zero of cold. Prolific, of medium, handsome, compact clusters of good, medium translucent red berries, having thin tough skin, melting pulp of quality about equaling Delaware, seeds small. A variety adapted to all soils and to a wide range of climate.

Lukfata. (†A20. 16 feet.) (V. Champini x Moore's Early.) Growth strong. Endures heat, drouth and cold remarkably well. Succeeds in black, limy soils. Not injured by mildew. Cluster medium, ovate, sometimes shouldered, compact; berries globular, large, persistent; does not crack; pulp about same as Moore's Early, more juicy and very sweet and agreeable.

Concord. (†A18. 12 feet.) This is the standard variety of the North where it does well and ripens evenly. In the South it does not ripen up so even especially after the vines get old. It ships well and is a good market grape. Fine for jellies. Cluster medium to large, berry large, black with foxy flavor. Pulp not as tender as many other varieties. It is a good variety to use for pollenating R. W. Munson, Fern, and some other of the extra fine but imperfect flowering varieties.

R. W. Munson. (†A3. 16 feet.) (Big Berry Post-Oak x Triumph.) Growth strong. Clusters medium to large, cylindrical, often shouldered, peduncle medium. Berries when well grown, medium to large, globular, persistent, black without bloom; skin never cracks; pulp tender, juicy and of a very good quality, better than Concord or Beacon. Gives good satisfaction on market. Bears heavily on long pruning and when pollenated by other erect stamened varieties flowering at same time, its own pollen not being fully adequate, although its flowers are perfect. Concord and Brilliant good pollenators for it. In Florida the Carman is reported as being an excellent pollenator. Shius well.

Mathilda. (†A25. 12 feet.) (Record symbol R8P3V3.) Seedling of Violet Chasselas, probably crossed with Brilliant. Large, handsome

clusters of above medium red berries. The berry is firm but very tender pulp. The quality of the very best. This has been noted every year since it began to bear and checked each time for a top-notch.

Salem. (*A17. 12 feet.) One of many Rogers hybrids that succeeds well in the South. Clusters large, berry very large, pink. Quality very best.

Niagara. (†A18. 12 feet.) The mate for a white grape of Concord in the North. Large cluster and berry, white of good quality. Quite handsome.

Cloeta. (*A25. 16 feet.) America x R. W. Munson. Vine vigorous and healthy. Fruit quite handsome with its medium size conical clusters, with rich black medium size berries. Fine for wine.

PERIOD V—AUGUST 1 TO 10

Mericadel. (†A26. 12 feet.) A hybrid of America with Delaware. Vine very vigorous and very productive; clusters large, berry medium, purple, very persistent to cluster; skin thin and tough; pulp tender and meaty, of very best quality; fine for table and market. Ripens late, just after Concord.

Champanel. (†A20. 16 feet.) (V. Champini x Worden.) Growth rampant, exceedingly resistant to heat and drouth, growing well in limy blacy soils. Clusters large, conical, with long peduncle, rather open. Berries globular, large, black, with white bloom, persistent. Does well in any soil, but especially valuable for very limy soils of the South.

Dr. Collier. (†A29. 16 feet.) Ten Dollar Prize Post-Oak and Concord Hybrid. Vine vigorous. Cluster large, conical, not very compact; berries large, globular, clear handsome

red, persistent, does not drop or crack; skin thin; flesh a little pulpy, very juicy. Should be thoroughly ripe, otherwise rather acid; good quality.

Extra. (†M1. 16 feet.) (Big Berry Post-Oak x Triumph.) Growth strong cluster oblong to cylindrical, sometimes shouldered, moderately compact. Berries persistent, globular, medium to large, dark purple to black, with moderate bloom; skin thin, tough, never cracks; pulp tender, juicy, sprightly, agreeable, sweet.

Bailey. (†A26. 16 feet.) (Big Berry Post-Oak x Triumph.) Growth strong. Clusters large to very large, cylindrical or often branching, generally compact. Berries persistent, large, black, with little bloom; skin thin and tough, never cracking; pulp meaty, but not tough, juicy, sprightly, of pure very good quality, considerably above Concord; seeds readily parting from pulp. A valuable market grape, easily superseding Concord, especially in South-Central and Southwest Texas, where it has done remarkably well.

PERIOD VI—AUGUST 10 TO 20

America. (*A23. 16 feet.) (Seedling of Jaeger, No. 70.) Growth very strong. Cluster conical sufficiently compact. Berries very persistent, medium size, globular, black, with little bloom, and scattering dotted jet black, with white speck in center of dots; skin thin and tender, but does not crack; pulp melting, juicy, easily freeing the slender seeds, when fully ripe very rich in sugar; also rich in agreeable acid; possesses a very distinct peculiar flavor, much liked by some; not "foxy," making a good combination market and wine grape. A very good port wine has been made from it without "fortifying." Very prolific with long arm pruning and when pollinated by other varieties, as it does not thoroughly pollinize itself.

Valhalla. (†A20. 16 feet.) A hybrid of Elvican and Brilliant; that is, one-fourth Mustang, one-fourth Elvira, one-fourth Lindley, and one-fourth Delaware. A very vigorous drouth-enduring prolific vine, well suited for black lands and will endure Missouri winters. Clusters medium; berry large, bright clear red; thin, tough skin; tender, juicy pulp of quality nearly equaling Brilliant.

Catawba. (†A18. 12 feet.) Cluster medium, conical. Berries above medium, clear dark red. Skin thin but tough to make good shipper. Pulp rather tender, juicy and sprightly with fine flavor. Fine for table market and wine. A good variety to plant among America, R. W. Munson, and Fern to pollenate them.

Blondin. (†A30. 16 feet.) Combination of Ten-Dollar-Prize-Post-Oak, Norton Virginia, and Herbemont. Cluster large, compact, shouldered; berry medium, white translucent; skin very thin and tough; pulp very tender, juicy, sprightly, quality excellent, nearly best. Very vigorous, prolific. Late, with Triumph and Catawba in season. Very valuable as a late market and white wine grape.

Wine King. (†A26. 16 feet.) A hybrid of Winona and America. Winona is a pure seedling of Norton Virginia, and quite an improvement on that celebrated variety, hence Wine King is a thoroughbred pure American blood of the finest wine properties. Cluster large, berry medium, black, very persistent. Skin thin, never cracks, pulp tender and juicy, rich and sprightly, intensely red juice.

Armalaga. (†M2. 12 feet.) A hybrid of Arm-long (which is a hybrid of native Post-Oak grape with Black Eagle) and Malaga. The vine is vigorous and healthy. Flower perfect. Cluster large and compact. Berry large, yellowish-green, translucent, persistent to cluster. The skin is thin, tough, yet pleasant to taste, without astringency. It endures shipping as well as Tokay. In quality equal to the best foreign grapes. This promises to be very valuable in all of the drier portions of the Southwest, as it is much harder than pure Vinifera kinds.



Blondin Grape

PERIOD VII—AUGUST 20 TO 30

Ellen Scott. (†M3. 12 feet.) Armlong hybridized with Herbemont. Vine beautiful, healthy, vigorous, prolific. Cluster large to very large, conical. Berry large, translucent, violet covered with a delicate bloom. Skin thin and tough. Pulp tender, very juicy and sprightly, of pure high quality, reminding one of the best foreign grapes. A very handsome table and market grape. Ripens after Catawba. This grape is especially valuable in West and Southwest Texas where the European varieties will grow, and we believe will become a valuable commercial variety for those regions.

Carman. (†A26. 12 feet.) (Post-Oak No. 1 x Triumph.) Growth vigorous; foliage never attacked by leaf folder or mildew, very prolific. Cluster large to very large, have reached two pounds in rare instances, shouldered or branches, conical, very compact. Berries persistent, medium, globular, black with thin bloom; skin thin and tough, never cracking; pulp meaty, firm, yet tender when fully ripe, of pure, rich quality, much superior to Concord; seeds easily leaving the pulp. This variety has become a popular and is a standard along the Coast from Corpus Christi to Florida.

Volney. (†M2. 12 feet.) This is a seedling of Ellen Scott apparently crossed with Muscat Rose. The color is about that of Ellen Scott. The cluster very large, berry large and slightly oval. The flavor is much like that of the Vinifera type and very delicious. A week later than Ellen Scott.

Edna. (*M3. 16 feet.) This is one of the handsomest grapes that we have. Large clusters of white berries. Of best quality. A hybrid of Armlong with Malaga. Has that flavor of the Muscat that is so good, but in this variety is superior owing to the peculiar combinations. It sets its fruit well though has recurved stamens. RONALDA, Ellen Scott and Armalaga are good pollinators for it.

PERIOD VIII—SEPTEMBER

Grapes in this period, while ripening here the last week of August, and first week in September will hang on for several weeks without deteriorating, as the nights are cool and birds have left.

Minnie. (†M4. 12 feet.) Minnie is a seedling of Edna, probably crossed with Longfellow. The cluster is large, conical and handsome. The berry is white covered with a peculiar bloom that makes the fruit look as though it were frosted, which adds much to its attractiveness. The berry is large. The pulp is tender and the quality of the very best.

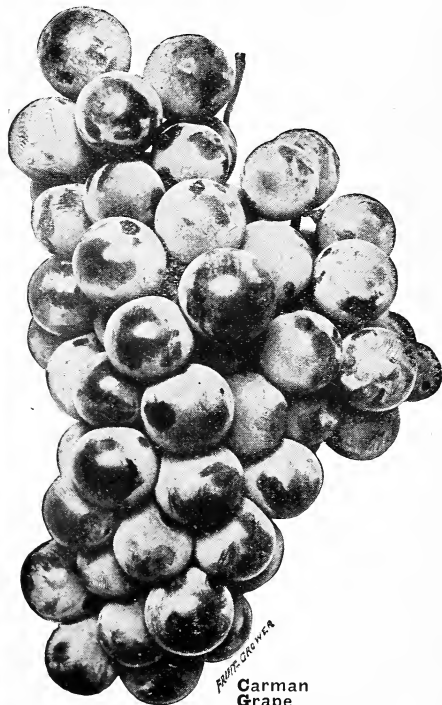
Columbian. (†M10. 12 feet.) Seedling of Isabelle, and first introduced as Union Village. Cluster small; berries immensely large, purple. Quality fair. Ripens unevenly. Its extreme large berries make it a novelty for those who wish large berries to be the prime object. Fine for jelly. Illustrated on page 162, Foundations of American Grape Culture.

Ronaldi. (†M4. 16 feet.) Armlong-Malaga hybrid. Long large clusters of white berries. As handsome as the Edna. The berries are round while slightly elongated in Edna. The Edna and Ronaldi are full sisters.

Elvicaud. (†M4. 16 feet.) Elvira-Mustang hybrid. Clusters small, berries medium, red. A fine vine for grafting stock, and also a fine variety to use as basis for breeding. A very interesting historical account is given on page 173 Foundations of American Grape Culture.

Muench. (†M2. 16 feet.) A hybrid of Neosho (a Missouri Post-Oak grape found by H. Jaeger) and Herbemont. Vine very vigorous and free from all diseases; cluster large to very large; berries above medium, purplish black; pulp very tender and meaty, of fine quality. Sells readily in the market, also fine for table. Well adapted to the South.

Jacquez. (†M2. 16 feet.) (Le Noir, Black Spanish.) Very prolific. Cluster rather open, but long and large. Berries small, very juicy and sprightly. Fine for red wine. Does well in Southwest Texas in semi-arid regions. In



Carman
Grape

moister regions requires spraying to keep off mildew and black rot, to which it is subject.

Herbemont. (†M5. 16 feet.) Vine very vigorous, healthy and long-lived in the South. Clusters large; berries small to medium, brownish red or translucent purple, not coloring much when in dense shade of foliage. Juicy and sprightly. Fine white or amber wine. Much subject to black rot, which will have to be kept in check by spraying. Well adapted for the South and only as far north as Kansas, as winters with 15 degrees below zero and colder will damage it.

Albania. (†M2. 12 feet.) Parentage: Post-Oak x Norton x Herbemont. Cluster large to very large, shouldered; berry medium, translucent white; skin thin and tough; pulp very tender and juicy, sprightly, with Herbemont character, but sweeter; very vigorous and prolific; uses, late market, table and white wine.

Fern Munson. (*M4. 16 feet.) (Post-Oak No. 1 x Catawba.) Growth very strong. Cluster medium to large with long peduncles. Berries globular, medium to large, very persistent; very dark purplish red to nearly black; skin thin, tough; pulp firm, but not tough; very juicy, sprightly, with very agreeable Catawba flavor when fully ripe; seeds leave the pulp readily. Very profitable, as it ripens when all old varieties are gone. Free from black rot. Has endured 27 degrees below zero and has borne well the following season. It endures drouth excellently. This is one of our very best varieties for general market when grapes are in greatest demand. It shows up well, ships well, and the vines are so vigorous, long-lived, and very prolific when well pollinated. Catawba, Muench, Herbemont, are good pollinators.

Last Rose. (*M5. 16 feet.) A hybrid of Armlong and Jefferson. Vine vigorous, healthy and prolific. Cluster very large, compact, long, peduncle, conical, with heavy shoulder. Berry me-

dium to large, dark bright red, round. Pulp tender, of very good quality. Ripening very late with or later than the Fern Munson, probably the latest grape in the list. Adapted to the same regions as the Ellen Scott. A very handsome market grape. Illustrated on page 188, Foundations of American Grape Culture.

Neva. (†M10. 16 feet.) In parentage a sister to the Muench, but later in ripening. Cluster longer and more compact with medium-sized clear, translucent, dark berries. A fine wine variety.

Marguerite. (†M18. 16 feet.) A Post-Oak grape and Herbemont hybrid. Cluster medium, berry medium. Pulp very tender and juicy, of best flavor. Dark purple in color. Very late to ripen. Most excellent wine variety.

Vinifera or European Grapes

As we find most varieties of this class not generally successful in the more humid regions East of the Rocky Mountains, we are not growing any vines of them, except that we have a few vines of two of the most hardy here, namely, the Muscat Rose and Violet Chasselas.

Southern Muscadines

Succeed in deep rich soil throughout the South. Require much high trellis room. Plant 16 to 20 feet apart in rows. Require little or no pruning. Fruiting varieties, to render them fruitful, need male vine growing near to pollenate them.

A most excellent work on the Muscadine Grape has been published by the United States Department of Agriculture, entitled THE MUSCADINE

GRAPES by Geo. C. Husmann and Chas. Dearing. It is a bulletin of 60 pages with numerous high grade halftones and colored plates. We have no copies of this bulletin for distribution, but if you send 25 cents to Superintendent of Documents, Government Printing Office, Washington, D. C., and ask for "Bureau of Plant Industry Bulletin No. 273, Muscadine Grapes," a copy will be sent you if still in print. Also Farmers' Bulletin, April, 1916, No. 709.

James. Black, of large size, 5 to 7 berries, which seem to hold in cluster better than most pure muscadines. Skin thick but flavor good.

Thomas. Very large, black, two to five berries to cluster, not persistent. Best of the pure black muscadines. Good wine.

Scuppernong. Large bronze yellow, juicy, good wine. Four to six berries to cluster.

La Salle. Hybrid of Muscadine and Post-Oak. Large, black berry with 6 to 15 to cluster and more persistent than Thomas. Skin thin, pulp tender and better quality than Scuppernong. Earlier to ripen of this class.

San Jacinto. Berry above medium. Cluster a little more filled than La Salle, about three times the size of Scuppernong. Quality a little better than La Salle and follows it in ripening. Very prolific. Same blood as La Salle.

Sanrubra. Hybrid of San Jacinto and Brilliant; about the same size as in San Jacinto; berry not quite so large as Scuppernong; much more persistent to cluster; skin quite thin, but never cracking; pulp melting and of best quality. Nearly as sweet as Sanalba; great acquisition. Very vigorous and productive.

Male Muscadine. To pollenate the bearing varieties to render them fruitful, one male for each six or less bearing vines will answer if all are in the same plat. At least one male should be in each plat, and one male for each six bearing vines when there are many bearing vines in the row.

THE ARMSTRONG STANDARD SPRAY PUMP

A One-Man, One Hundred Purpose Pump.

As supplied for spraying from bucket.

The Armstrong Standard Spray Pump is simply a very carefully designed and accurately made "squirt-gun" provided with a proper out-

fit of nozzles. Its simplicity largely accounts for its unusual power.

Its plan of operation is so simple and so different from other types of spraying apparatus. This permits the use of the hose on the suction end instead of on the discharge end. That is why it is possible to use the Armstrong Standard either with a bucket, barrel or knapsack, depending upon the number of trees or the kind of spraying to be done.

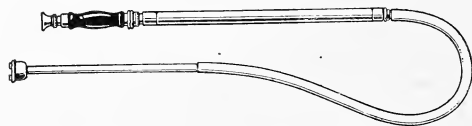
For bucket use, a short length of hose is supplied. To use it with barrel or tank for a larger orchard, a longer length of hose up to 25 or 30 feet is desirable. The work of spraying is always done from the ground. No ladder, long extension or platform is needed. A large tree can be completely sprayed with ten or a dozen strokes of the pump. The work is done rapidly and with a minimum of labor and, by reason of the equal strokes, spraying material is not dissipated.

By different arrangements of the several nozzles regularly supplied, sprays of varying fineness—from a mist to a straight stream that carries sixty feet—are produced.

The Armstrong Standard is made entirely of brass. No leather packings are used and no metal subject to rust or decay. Every Armstrong Standard is warranted for five years. This makes it the most economical spraying device on the market.

PRICE

The Armstrong Standard Pump, with short hose and all three spraying nozzles (for bucket use). Each\$5.50



Blackberries and Dewberries

Plant in rows 7 feet apart by 2 feet apart in row.

THE ground should be plowed and harrowed frequently for some weeks before plants are received. It must be in finest condition for good results.

Plant in ordinary furrows. The plants should be leaned down the furrow until the top is level with the ground. Press moist soil on roots and mound loosely, slightly over top. If soil is dry, use water in planting.

Blackberries thrive almost in any soil, but give far better results on good rich ground and good cultivation. The ground should be manured each season. Blackberries (and Raspberries) bear their fruit upon the canes grown the prior summer. Then the canes that bore their fruit will die that fall, while new canes that come up during the spring and summer are the ones to bear next spring. In pruning in the fall, the old canes that bore the fruit should be removed by cutting off at the ground, and the new canes cut back at the point where they want to bend downwards, so that the canes after pruning, will stand erect and firm. See books on small fruit culture on page 2.

Not less than 12 of a variety will be sold. It will require at least 25 plants to make enough fruit for the average family, so it is not practical to plant a less number. If less than 12 are ordered, the price for 12 will be charged for any less number. Prices on page —.

Mayes Dewberry. (Austin's Improved, Austin-Mayes.) This is about the only dewberry grown commercially in North Texas. Very large, fine flavor, early and prolific. Fine for home use and local market. Makes preserves and jelly of a different flavor than blackberries. (The dewberries found in South Texas are not suited in North Texas.)

Thornless Dewberry. This is a sport of the Mayes Dewberry, bearing berries as large in size and in a great quantity, with quality of flavor about the same. Otherwise like the Mayes except as the name indicates it is without thorns, which makes it quite desirable.

Early Harvest. This is one of the best early blackberries grown in the Southwest. It has a perfect flower. In order to get best results it should be pruned close as it is inclined to set more fruit than it can ripen in case season is drouthy. Does best upon rich well manured land.

McDonald Blackberry. This appears to be a hybrid of a blackberry and dewberry. Large and of good quality. Earliest of all blackberries and begins a very few days after the Mayes dewberry. Having a pistillate or purely female flower, it will not set fruit alone as it must get its pollen from a staminate or perfect flowering kind growing near and blooming at same time. The Mayes Dewberry, Sorsby or Early Harvest Blackberry are good.

Dallas. This is one of the most sure of all blackberries and endures Texas climate well. Ripens after McDonald and before the Robison. Has rather drooping vine, thorny, very productive, medium size berry of fine quality.

Robison. This is the best of all blackberries and the very best of late ripening varieties for the Southwest. On good soil produces heavy crop of large berries almost as large though not so juicy as the old Kittatinney (which we dropped years ago on account of its poor resistance to rust). Best canning variety.

Raspberries

ALL varieties of raspberries are not successful in the Southwest. The finest varieties of the North and East are failures here as they will not endure the long, hot, drouthy summers

that we sometimes have. But those varieties named below after testing over many years are found to be quite successful in the Southwest, especialy so on favored locations and soils. Raspberries require the best drouth resisting soil, and if possible in a location where the soil is kept cool. They suffer more during the hot drouthy days of August than any other period of the season. For this reason it will be beneficial to mulch the ground about the plants with straw after the crop is off to keep the soil moist and cool.

Prices on page 2.

No less than 12 will be sold.

Kansas. This is one of the best black caps that we have grown, being the largest and very prolific.

Cardinal. A very large, dark red, prolific variety of best quality of the successful South-western varieties.

St. Regis. Large, firm, red sort. Bears from April on to hot weather in the South, and it is claimed it will bear on to frost in the North.

Strawberries

SET the plants as you would tomato or potato plants, one foot by two or two and a half feet apart. Give each plant a pint or quart of water. Straw (free of seed) or leaves should be spread as a mulch over the ground to cover partially or entirely the plants through the winter. During warm spells, rake the mulch of straw or leaves away from the plants. This can easily be done with a small home patch, and the mulch raked back to the plants during freezing weather.

Plant in rows $3\frac{1}{2}$ feet apart and 18 inches apart in the row, which will require in round numbers 8,000 plants per acre. Or if in rows $3\frac{1}{4}$ feet by 2 feet apart in row, 6,000 plants per acre. In garden plat where cultivating is to be done entirely by hoe, plant 2 feet by 2 feet each way, at this distance a plat of ground 50 by 50 feet will take 600 plants. A good loamy sandy soil about 10 to 12 inches deep over clay subsoil is best. They respond wonderfully to fertilizing. See books on Strawberry Culture as listed on page 2.

Lady Thompson. An extra early variety and fine to have to open season, and ripens off in few pickings. Large, light red.

Klondike. The best all-round mid-season berry and well adapted generally over the Southwest. Prolific. In season for two or more weeks. Large, bright red, with prominent golden seeds.

Aroma. A very large, dark red, fine to follow Klondike and to close the season.

Ettersburg. This is to our notion one of the best flavored strawberries grown. Round, large, very dark rich red. Originated in California and does well in Texas where strawberries grow. Fine for irrigation in West Texas.

Progressive Everbearing. This is one of the best known and popular of the Everbearing sorts. While we do not think Everbearing varieties are commercially successful in the South, this variety is giving satisfaction as a variety so that one can have berries over a longer season. It bears about six weeks in spring in South and then again in the fall. In the North it bears from June until September. Medium size, fair quality.

Giant Everbearing. A customer of ours in the Pan Handle section of the state states that this variety is one of the best of all of the Everbearing sorts for his section of the state. It is

also reported as successful in other localities, especially in Mid State section of the country. Large and round and make an attractive show. Does not bear as heavily as other sorts but its size makes up for that feature.

Asparagus

Make soil rich, dig trench; set 15 to 18 inches apart, roots spread out, crown 2 inches below surface.

We offer two of the leading varieties:

Columbian Mammoth. White stalk.

Palmetto. Green stalk.

CURRANTS AND GOOSEBERRIES

Currants and Gooseberries are not fully successful in the Southwest, so we do not grow them.

We have also tried out the **Hymalla, Phe-nominal, Thornless Blackberries** of different types, and all failed to prove satisfactory here in North Texas, though some are reported as most excellent on Pacific Coast and elsewhere. We are not propagating any for the reason that they failed to make good here.

CHINESE JUJUBE

(*Zizyphus Jujuba*)

A fruit from the high interior of China, to which the United States Department of Agriculture has given much attention in recent years. We have tried it carefully, and are sure it will prove to be one of the most valuable of fruits for our country. It is adapted to a wide range of territory and all kinds of soils.

Tree is very hardy, slightly resembling Prictly Ash. Fruit is chocolate colored, some varieties round, some olive-shaped, and some pear shaped, of the texture of an apple. Size. one to two inches long. Fruit can be eaten fresh, preserved, or cured like dates. Ripens July to November.

It likes a clean back yard, that is not cultivated, but will grow anywhere.

The trees we offer are sucker grown trees coming from roots of the tree bearing the Large Round Fruit, ripening here in September. Price:

1 to 2 ft.....	\$0.50 each
2 to 3 ft.....	.75 each
3 to 4 ft.....	1.00 each



SHADE AND ORNAMENTAL TREES

MANY fine shade trees die the first season, after being carefully planted, from neglect of cultivation during the summer. Dig extra large holes, 4 ft. across and 2½ ft. deep. It would benefit to dynamite the bottom of the hole. In filling up roots use only good loamy moist soil. Then every two weeks during the summer cultivate the ground whether weedy or not, whether wet or dry, by digging up the soil two inches deep for a radius of four feet. Allow no Bermuda or other grass closer to the tree than four feet for two years. It will be well to mulch the trees with rakings of grass or old leaves. All these points are important. Many start to cultivate during the cool days of spring, but neglect during July and August, just the very time young set trees should have attention.

Directions for Planting and Pruning. Before setting out, cut off the broken or bruised roots, should there be any. Trees with branching heads should have the smaller branches cut out, and the larger branches cut back to within three or four buds of their base; but, when a tree has an abundance of roots, and a small top, and few branches, then the pruning need not be so severe. However, when the roots are small and the top heavy, then prune the tree severely. In many cases remove every lateral limb, preserving only the leader, and this, if too long, may be cut back to the proper height. Frequently large trees are transplanted without pruning. This neglect will often cause the tree to die. Dig the hole intended for the tree of ample size, so when the young roots start out they will have soft ground in which to grow. The best fertilizer is well-rooted stable manure, thoroughly mixed with the soil.

Plant about two inches deeper than the tree originally stood in the nursery row, using the top soil for filling in around the roots. See that every interstice around the roots is thoroughly

filled, and that every root is brought into contact with the soil. When the hole is nearly filled, pour in a bucket of water, so as to set the soil around the roots, then fill in the balance of the hole and press the dirt gently with the foot. When the tree is planted, mulch with five to six inches of well-decomposed stable manure, or rotted leaves; this should extend over the circumference of the hole. Keep free from grass and weeds, and loosen up the soil every 15 days.

We do not advocate planting extra large shade trees, say above 2 inches in caliper measurement at top of ground. While larger trees can be planted and seemingly give a quicker effect, in reality they do not after five years' time. The larger trees are slower to start off and often remain stationary, if they do not die, so a younger, thrifty tree will be growing all the while and at end of five years will overtake the oversized tree, and also be a far better tree. The 6 to 8 ft. tree up to the 2-inch caliper tree is the ideal size, and for this reason we do not quote larger, although we have many much larger.

CATALPA

Umbrella Catalpa. (C. Bungei.) This tree has become popular because of its straight stems, and symmetrical roundish heads which resemble an umbrella. The tops are dwarf and while they do not grow very rapidly their wide leaves give them the appearance of much larger trees. The foliage is very pleasing and the effect obtained when planted in pairs along walks, drives or entrances is greatly admired.

Heads grafted 6 to 7 ft. above ground, \$2.00 each.

LIVE OAK

(Quercus Virginiana.) (Evr.) The Live Oak is one of the finest and most popular Evergreen shade and ornamental trees. It is a comparatively quick grower, is symmetrical in shape, entirely evergreen, has dark, glossy green foliage and is a very clean tree for lawn and avenue planting. Owing to its great difficulty in successful transplanting, only small trees should be used. Clip leaves from these the same as directed for Magnolia Grandiflora. 4 to 5 ft., 6-year trees, \$2.00 each.

MINT TREE AND FLOWERING WILLOW

See under Tree-Like Shrubs, page 22.

(Owing to expense in packing we make no lower rate for quantities, except that 12 trees will be supplied for price of ten.)

	3 to 4 feet	4 to 6 feet	6 to 8 feet	8 to 10 feet	
	Each	Each	Each	1 1/4 inch caliper	1 1/2 inch
Elm, American White. (Ulmus Americana.) Our tall, wide spreading, native broad-leaved, white, or American Elm. The new growth long and switchy, sometimes pendant at the ends, often, however (forming the vast type), limbs gracefully upward. Attains one hundred feet or more. Indispensable in all Southern plantings.	\$0.30	\$0.50	\$0.75	\$1.00	\$1.50
Hackberry. (Celtis Occidentalis.) Perhaps the healthiest, most vigorous, most durable of our native trees, in all soils and conditions. Invaluable as street trees or as single specimens on the lawn and in grouping. We have found the hackberries, four to seven years old, transplant better than younger trees, which is very uncommon, the opposite of most trees. Plant with the view of their standing and growing for generations.	.30	.50	.75	1.00	
Locust, Black. (Robinia Pseudacacia.) A well known species, largely planted throughout our country as shade and street trees, windbreaks and timber belts. Very popular in the treeless prairies, especially west of the 100th meridian. Of rapid growth, reproducing itself quickly after cutting, and the timber is very durable.	.15	.20	.35	.50	.80 \$1.20
Besides the sizes priced we can supply larger trees from 2 inches, 2 1/4 inches; 2 1/2 inches, and 3 inches at \$1.50 to \$3.00 each. Our stock of locust is large in all sizes and those wanting large numbers will be glad to make special quotations.					
Poplar, Carolina. (P. Caroliniensis.) Considered as distinct from the Cottonwood, it differs in its strict, straight appearance, making a more upright, uniform head. A very rapid growing, effective tree, much planted throughout our country.	.25	.35	.50	.75	
Sycamore. Very symmetrical, quick growing. Easy to transplant. Older trees have white underbark. Large leaves. Adapted equally well to black and sandy soils.	.30	.40	.60	1.00	1.25
Maple. (Soft or Silver Leaved.) Quick growth, spreading and makes a beautiful tree on soils where it succeeds. Like a drouth resisting soil, a good loam that holds moisture. Not adapted to dry situations.	.20	.30	.50	.75	1.25
Texas Umbrella China. Has umbrella shaped head 4 feet from ground. Dark green foliage of dense amount of compound leaves. Full of sweet scented blossoms in spring. Will winter-kill at zero temperature.	.50	.75	1.00		
Tulip Tree or Yellow Poplar. A very handsome tree with attractive shaped and peculiarly lobed leaves. After it is several years old, it bears a very attractive large flower the shape of a tulip bloom. Very large trees do not transplant well, but success can be obtained by planting the smaller sizes from 3 to 4, to 6 to 8 ft. sizes.	.25	.50	.75		



DECIDUOUS FLOWERING SHRUBS

LARGELY in demand for massing or grouping effects in landscape, parks or other ornamental planting, and also as single specimens. Much depends upon the skill of the artist or planter in the proper selection, grouping or massing of Flowering Shrubs, to bring out the most pleasing and artistic effects. It is scarcely practicable to define set rules. Good soil and good culture will be amply repaid.

We have grown a large stock of shrubs to meet the growing demand which is increasing. As the Southwestern country is getting older, more attention is being paid to ornamentation of Homes, Yards, Parks, etc. To be successful, plant only those shrubs that are adapted. Do not make a mistake of planting some shrub that makes a fine show 1,000 miles away, for it may not endure the climatic conditions here. All those listed by us are fully successful in the Southwest.

See page 2 for valuable books on Shrub Culture and Landscape Gardening.

PLANTING AND CULTIVATING SHRUBS

The same directions for the preparation of the soil and planting as given for deciduous fruit trees apply to the average deciduous shrub. We cannot, however, too strongly emphasize the necessity of keeping the ground free from weeds and grass, and loose by frequently stirring, after being planted.

Do not fail to properly prune your shrubs as soon as planted. The success of your plants depends upon proper pruning. All deciduous shrubs should be pruned annually. The tops and branches should be cut back one-third or one-half if necessary; all dead branches and weak growth should be removed, and care must be exercised not to cut off the blooming wood. All shrubs that flower on the previous year's growth should not be pruned until June or July, or after the blooming period has passed. To this class belong the Althaeas, Cydonias, Deutzias, Forsythias, Philadelphus, Spirea, etc., but such varieties as Ceanothus, Hydrangea, Lonicera, Lilac, etc., which produce flowers upon the young growth, should be pruned during winter. Do not fail to fertilize your shrubs at least once a year.

FOR YOUR BENEFIT

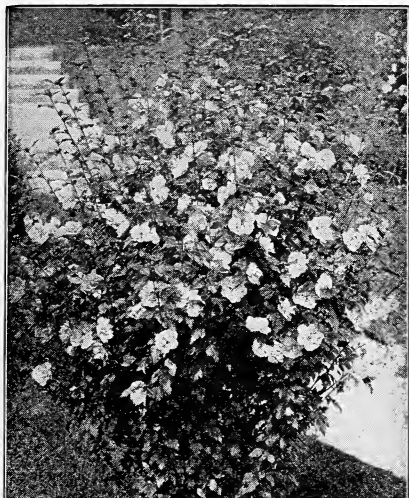
We have bought several copies of "THE AMATEUR'S GUIDE TO LANDSCAPE GARDENING," by E. G. Hilburn of North Dakota. This is an attractive book of 48 pages, printed upon the best of paper and well illustrated, and gives the best ideas of how to plan your home grounds planting to get best results both from viewpoint of effect as well as to growth of the shrubs, evergreens, and trees that are planted. The price of this book is 75 cents each.

But with every SHRUB order (not Fruit Trees, but only on items listed on this and following pages of Catalog) amounting to \$5.00 or more, we will present you with a copy FREE.

PRICES

The price mentioned is the price for single specimens. Dozen for price of ten plants. Hundred for price of eighty plants.

The one year size are usually 12 to 18 inches; the 2 year, 2 to 3 feet; the 3 year, 4 to 5 feet.



Althea

ABELIA GRANDIFLORA

A hardy, free blooming shrub with shiny, purplish, evergreen leaves; bears a profusion of clusters of tubular shaped flowers about one inch long, white inside, delicate pink outside. Fragrant. Very desirable. For best results in transplanting, it is best to cut tops off to within four inches of crown. 12 to 18 inch, 50c each; 2 ft., \$1.00 each.

ALMOND (Amygdalus)

Bloom very early before they leaf out. Growth dwarf, bushy, compact. When in bloom completely hidden by beautiful double globular flowers smugling tight to the twigs.

White Double Flowered Almond. 60c each.
Pink Double Flowered Almond. 50c each.

ALTHEA

Rose of Sharon (*Hibiscus syriacus*)—An upright grower; flowers of different colors, somewhat resembling the hollyhock; very hardy; withstands drouth; blooms from July till frost. Suitable for planting at back of shrubbery beds and in foundation plantings where foundations are high. We offer the following colors:

Double White.
Banner, Light Pink, Double.
Duchess de Brabant. Reddish lilac color; very large and double. 1-year, 25c each; 2-year, 35c each; 3-year, 60c each.

BARBERY (Berberis)

Barberry *Thunbergii* (Japanese Barberry)—There is no shrub in existence so generally planted or more practical for all purposes where beautiful foliage effect is desired than this. It is dwarf growing, uniformly bushy and rounded in form, numerous leaves densely covering the thorny twigs. These give is paramount importance for us as a filler and edging for shrubbery groups; as a foundation screen in front of porches and above all, as a compact, impassable, hardy, low hedge for confining lawns or dividing properties. 8 to 10 inch, 25c each.

BUDDLEIA

Butterfly Bush (Summer Lilac)—One of the most admired an dsought-after shrubs in the trade. Of quick, bushy growth. The lovely bloom spikes appear in July and bloom profusely until cold weather. The blossoms have the tint and the shape of the Spring Lilac and

their delightful perfume attracts numerous large and gorgeously colored butterflies that swarm about it as though vieing with it in brilliancy of color. Flower spikes ten inches in length by three inches in diameter are not unusual. 1 year, 35c each.

BUSH HONEYSUCKLE (Lonicera)

Fragrant Bush Honeysuckle (*L. Fragrantissima*)—A spreading shrub with deep green foliage and fragrant small white flowers which appear before the leaves; bushes are erect in growth. 1-year, 25c each; 2-year, 40c each.

Pink Tartarian Honeysuckle (*L. Tartarica rosea*)—Pink flowers that make a lovely contrast with the foliage. 1-year, 40c each.

Red Tartarian Honeysuckle (*L. T. var. rubra*)—Blooms early in the spring; flowers a beautiful bright red. 1-year, 40c each.

CAPE MYRTLE

This is typically a Southern shrub, attaining 20 feet high at ten or so years old. Blooms from June to September in hottest summers. Has plume like clusters of crape flowerlets. Can be planted singly, in groups or in hedge formation.

We have Light Pink, Imperial Pink, Crimson. 1-year, 35c; 2-year, 50c.

CYNDONIA JAPONICA

Scarlet Japan Quince. One of the best flowering shrubs; flowers a bright scarlet crimson, borne in great profusion in early spring; foliage retains its color of bright glossy green the entire summer; hardy; make good hedge plants. 1-year, 20c; 2-year, 35c; 3-year, 60c.

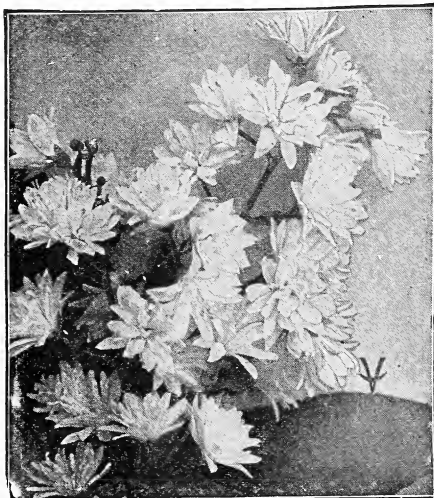
DEUTZIA

Valuable self-sustaining shrubs which vary considerably in height and habit, but bloom alike in dainty bell or tassel-shaped flowers borne thickly in wreaths along their branches. The taller sorts are useful for specimens, groups, and the background of shrubberies; the dwarfier, for borders or for planting near the house.

Deutzia *Crenata*, tall light pink. 1-year, 35c.
Deutzia *Watsonii* (Pride of Rochester) tall, pure white. 1-year, 25c; 2-year, 40c.

Deutzia *Lemoinei*—Flowers pure white; shrub dwarf and free flowering; excellent for forcing. 1-year, 40c; 2-year, 60c.

Deutzia *Gracilis*—Pretty, small white flowers; dwarf growing; very dense. 2-year, 1 foot, 65c.



Deutzia

ELEAGNUS

Eleagnus Umbrella (Japanese Oleaster). A large shrub with spreading, often spiny branches, clothed with yellowish-brown scales. Leaves silvery-white beneath. Flowers fragrant, yellowish-white. Berries scarlet when ripe in early summer.

The fruit is borne more in clusters and not singly as in case of *Eleagnus Longipes* (Goumi). Makes good jelly. **35c each.**

Eleagnus Longipes (Goumi). No plants this season.

Eleagnus Angustifolia. Better known as Russian Olive. Makes a large shrub almost shade tree form. Olive green leaves above and wooly beneath. Fine for making shade in corners, and desired where a tall shrub is desired. **1 to 2 feet, 25c each; 2 to 3 feet, 35c each.**

FORSYTHIA (Golden Bell)

A valuable genus of shrubs from China and Japan, blooming very early in spring. Flowers yellow, drooping, borne in great profusion. Entirely hardy here and of the easiest culture.

Forsythia Fortunei. Desirable, vigorous growing shrub of 8 to 10 feet, producing golden-yellow blooms in March. **1-year, 40c; 2-year, 60c.**

JASMINUM

Semi-climbing or vine-like shrubs.

Jasminum Humile. The Italian Jasmine. Nearly evergreen in the South. Has yellow flowers in terminal peduncles. Can be grown as a shrub among a group or trained up on side of porch, or under window. **50c each.**

Jasminum Nudiflorum. Glossy green leaves until late in fall. After stems have become naked the shrubs will bloom nearly all winter, having small yellow flowers. **50c each.**

KERRIA JAPONICA

Kerria Japonica (Japan Corchorus). A handsome, green-leaved shrub, growing 4 to 5 feet. Graceful, slender, drooping branches, painted with a wealth of rich dark yellow flowers in June, and to some extent all summer. Does better in partial shade out of hot sun. **1 year, 60c.**

PHILADELPHUS

Very handsome and vigorous growing shrubs with large foliage and beautiful flowers, which are produced in great profusion the latter part of April and early May in North Texas. Often called Syringa or Mock Orange.

**Philadelphus**

Philadelphus Coronarius. Sweet Mockorange. A highly scented species, the pleasant fragrance being noticed at quite a distance. **1-year, 25c each; 2-year, 40c each.**

Philadelphus Grandiflorus. The big scentless Mockorange. Larger white flowers than *Coronarius*, but not so sweet scented. **35c each.**

POMEGRANATE (Flowering)

Punica Granatum. Shrubs with glossy green leaves with large, waxy-like, beautiful flowers about two inches across. Generally hardy in North Texas, but fully hardy from Waco, Tyler and south. One of the brightest and most popular flowering shrubs in the South. When pruned becomes spiny and makes a defensive hedge.

Double Salamon. **1-year, 20c each; 2-year, 35c each.**

Double Scarlet. **1-year, 25c each.**

PYRACANTHIA

Pyracantha coccinea (California Hawthorne, Burning Bush). Originally from Europe. Large thorny shrub, attaining a height of 12 to 15 feet in ten years time, and spreading. With small ovate leaves. Bears a great profusion of pinkish-white flowers in flat corymbs, followed by a mass of orange-red berries in fall and hanging on for several weeks. A very attractive shrub especially for fall effects. **1-year plants, 8 to 10 inches, 35c each; 10 to 15 inches, 50c each.**

PRIVET

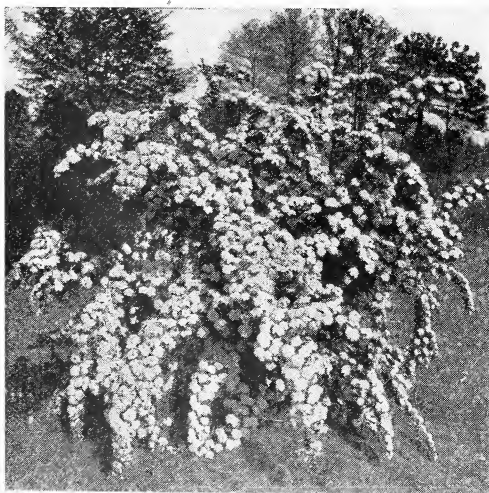
(See under Hedging Plants.)

SPIREA—MEADOW SWEET

This family contains more attractive varieties than any. They range in height from very dwarf to tall, color of blossom from white to red, and period of bloom from early April to August. It contains a large number of species and those we catalog are really the choicest. All are very attractive and they are not particular as to soil.

Spirea Anthony Waterer. Bright rose pink. June and July. A compact low growing shrub with dense foliage usually deep green with occasional variegated leaves of pink and white on young growth. Flowers are borne in full flat clusters on erect stems. If these are cut away when they fade the shrub will usually bloom intermittently during the summer. Very valuable for edging in front of shrubbery or sometimes used as a dwarf hedge. **1-year, 40c each.**

***Spirea Billardii rosea** (Billard's Spirea). Bright pink. July and August. Erect in habit of growth, red-brown branches and dull green

**Spirea Van Houttei**

**Thunbergi Spirea**

foliage. The terminals always crowded with dense spikes six inches long; bright pink. Grows anywhere and is found especially serviceable on hill sides and dry places. 1-year, 15c each; 2-year, 25c each; 3-year, 40c each.

Spirea Callosa alba. In habit and shape of flowers borne close to the slender erect branches of *Spirea Billiardii*. Flowers a shade deeper, otherwise in character of growth, habitat and general characteristics like *Billiardii*. 1-year, 25c each; 2-year, 35c each.

Spirea Douglasi. Deep pink, July. Slightly taller and a little more branched than *Spirea Billiardii*. Flowers a shade deeper, otherwise in character of growth, habitat and general characteristics like *Billiardii*. 1-year, 25c each; 2-year, 35c each.

Spirea prunifolia (Plum-leaved Spirea). White. April-May. This is an old-fashioned variety, flowers borne close to the slender erect branches in the spring before foliage appears. The individual flowers resemble miniature roses and are usually borne in great profusion. The foliage is shiny dark green and in the fall turns bright red. 1-year, 25c each.

Spirea Lindleyana. Very tall growing, resembling Elderberry in habit. Large cluster or heads of white flowers blooming in early summer. 2 to 3 feet, 30c each; 4 to 5 feet, 50c each.

Spirea Van Houttei (Bridal Bower or Bridal Wreath.) White. This is the most useful of the hardy shrubs. It has grown so popular that we sell more of it than any other variety we grow. The flowers are in flat clusters usually an inch or more across produced on spreading, pendulous branches often drooping to the ground. In full bloom they are a mass of white and never fail to attract attention. The foliage is an attractive green which it retains late in the year. 1-year, 20c each; 2-year, 35c each; 3-year, 60c each.

Spirea Thunbergi. Forms a dense feathery bush, 3 to 5 feet high, the foliage, which is a peculiar but pleasing shade of yellowish green, changing in autumn to bright red and orange. Flowers pure white, borne in feathery masses in early spring. 1-year, 40c each.

SALVIA

Salvia Gregii. A new shrub found native in Southwest Texas. Blooms from early spring to

late fall. Always covered with bright red flowers. Makes a neat, compact, graceful shrub 2 to 4 feet high. Endures heat well. 50c.

SYRINGA (Lilac)

Lilacs. Popular old-time garden shrubs, that fill in early spring with their fragrant beautiful conical cluster blossoms. They require two or more years to bloom, but live a long time.

Common Purple Lilac. 25c each.

Common White Lilac. 35c each.

Purple Persian Lilac. 60c each.

White Persian Lilac. 60c each.

Large Red Lilac. 75c each.

SYMPHORICARPOS

S. Racemosus (White Snowberry). (F) 4-5 ft. This shrub has small pinkish flowers in July, followed by white berries which remain on well into the winter. 1 to 2 feet, 25c; 2 to 3 feet, 40c.

S. Vulgaris (Red Snowberry.) (Coralberry, Buck Bush, Indian Currant.) 4-5 ft. A very hardy, tough shrub that can be established where others fail. Its wealth of coral-like berries are quite showy during winter. 25c.

WEIGELIA (Diervilla)

Hardy, profuse-blooming shrubs of spreading habit. These are among the showiest of the garden shrubs, producing in early April great masses of showy flowers.

Weigelia Rosea. Rose-pink flowers, green foliage. 35c each.

Weigelia Variegata. Variegated green and white foliage, light pink flowers. 40c each.

HYDRANGEA

When given a rich, moist soil, where they are protected from the afternoon sun of summer, and the plants kept well enriched, there is nothing more attractive than a mass of well-developed specimen Hydrangeas. They are also very desirable when grown singly or in tubs. In the South most Hydrangeas will not grow well in the open, and for this reason we list the most hardy, and even it will not stand the direct hot rays of the afternoon sun of July and August. We list it for those who wish to try it out.

Hydrangea Arborescens. Hills of Snow. Blooms very large and snowy white, and continuous throughout summer under favorable conditions. 50c each.

TREE-LIKE SHRUBS

While these do not grow, with tall straight trunks to make suitable sidewalk or large shade trees, they are fine to plant in groups covering large space, or as single specimens in any part of the yard.

Red Bud (*Cercis Canadensis*). Bears large clusters of pink flowers in early spring, before tree leaves out. 2 to 3 feet, 50c.

LIVE OAK. (See under Shade Trees.)

Mint Tree (Chase Tree) (*Vitex Agnus Castus*.) Will grow to height of 20 feet in five or six years, but has shrub-like shape, globular in form. Leaves are deeply five-fingered. Has spikes of blue flowers all summer. Foliage has mint-like fragrance. Attractive to bees and fine for honey. 1-year, 25c; 2-year, 40c; 3-year, 75c.

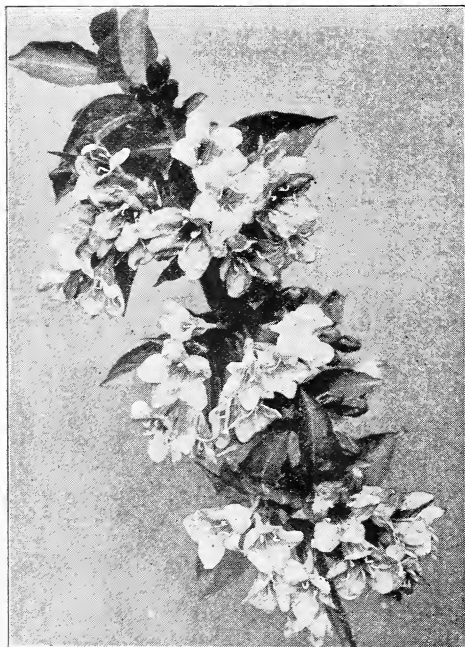
Flowering Willow (so-called) (*Chilopsis linearis*). A tall tree-like shrub, with narrow leaves resembling willow, also the branches have the willow drooping effect. Blooms all summer in hottest of weather, and fine for arid regions as well as moist. Has tubular flowers, 1½ inches long. We have two colors.

White Flowering Willow. 1-year, 40c.

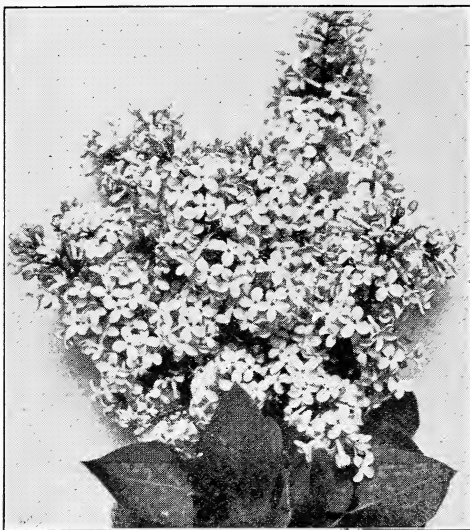
Purple Flowering Willow. 1-year, 40c.

TAMARIX

Tamarix Plumosa (Salt Cedar). Fine willow foliage, growth and habit perfectly informal. Foliage resembles that of cypress. Flowers red, small flowerlets in large terminal spike. Blooms in March and early April, over a short season. This variety blooms ten days earlier than the next (Japan). To get most graceful effects, trim severely each year. Fine for hedging and for windbreaks. While it will grow most anywhere, it is used along the sea coast where but few other trees will grow, as the salt atmosphere does not injure it. 2 to 3 feet, 15c each; 3 to 4 feet, 25c each.



Weigelia



Lilac

Tamarix Japonica. Like the Japonica except that the flowers are pink instead of red. 2 to 3 feet, 35c each; 3 to 4 feet, 50c each.

PERENNIALS**HYBRID HARDY PERENNIAL HIBISCUS**

By hybridizing the native species *Hibiscus Moscheutos*, *Hibiscus Militar*, and *Hibiscus Coccineus*, we have obtained from the common Marsh Mallows a most remarkable lot of splendid varieties in numerous shades from pure white with crimson eye, through most delicate and rich pinks from blush to dark pink, crimson or many shades, and glowing scarlet, as though glossed with varnish. The colors all are of clear, fresh, lively shades. This group of wonderful flowers, rich enough for the garden of any king, eclipsing *Cosmos* and *Shasta Daisies* a thousand times, we have produced in a few generations of selecting and crossing. The flowers are often 8 to 12 inches in diameter and glow like suns of various colors. As soon as known these new creations will become exceedingly popular, as the plants are of the easiest culture and are perpetual bloomers throughout the summer in the driest seasons. They grow 5 to 6 feet tall. The tops die down in the fall, but roots live for many years, sending up many stalks to flower each season. The seeds sown early in spring will produce blooming plants the latter part of the first season.

Of all the wonders produced by hybridization, none is more remarkable or strikingly beautiful for bedding in borders or in the garden than these.

The flowers are not double, but though single, are gorgeous. They bloom out full in early morning and fold up during heat of afternoon.

In sending plants, we leave a part of the last season's (dead) top as a handle by which to lift and otherwise handle the roots. The roots should never get dry, and plant so the crown is covered up. New top will come out from same crown as indicated by the dead top.

The plants do not come true to color from seed, but in an assortment of few or many, there will be all colors, either white, pink or scarlet. When plants are in bloom we mark the colors so we can send roots of the marked colors at a price in advance of those not so marked.

	Each	Doz.	100
One-year roots, colors not marked.....	\$0.10	\$1.00	\$7.00
Two-year roots, colors not marked.....	.20	2.00	15.00
Two-year roots, scarlet.....	.40	4.00	
Two-year roots, pink.....	.35	3.50	
Two-year roots, white.....	.25	2.50	

Seed saved from all colors, 25c per packet.

SHASTA DAISIES

We can supply division roots of these at 10c each, \$1.00 per dozen.

PEONIES

In the Southwest the Peony has not been given the attention it has received in the North, perhaps that it was not given proper attention in selection of site and richness of soil. The best situation is on North or East side of building so as to protect roots throughout the summer from excessive heat of afternoon sun. Also a partially shaded situation among higher shrubs, is good. They are easily grown and once planted do not have to be replanted each season.

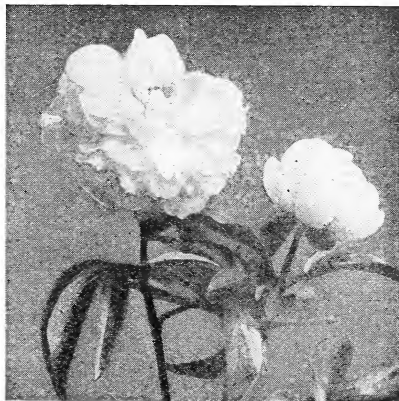
Prices given for 3 to 5 live eyed divisions from blooming plants.

Edulis Superba. Beautiful deep rose pink; large, of good form. One of the earliest and blooms over a long season. Vigorous and blooms profusely. 35c each; \$3.60 per dozen.

Duchess d'Orleans. Large carmine pink guards, center soft pink, interspersed with salmon. Large. Mid-season. 35c each; \$3.60 per dozen.

Festima Maxima. Of enormous size and wondrous beauty; pure paper white, some center petals flecked carmine. Early, very long heavy stems. 50c each; \$5.00 per dozen.

Duchess de Nemours. Superb Ivory white becoming pure white, finest midseason white. 40c



Peony

each; \$4.00 per dozen.

Red. Unnamed variety. 40c each; \$4.00 per dozen.

Mixed. A good selection of mixed named but unlabeled varieties and grown mixed. 25c each; \$2.50 per dozen; \$18.00 per 100.

Hardy Perennial Phlox

This is one of the more satisfactory perennial flowers, as they are hardy here and dependable. Best results are obtained by planting in well worked loamy soil moderately rich, though they grow most anywhere. We offer a few of the best varieties which assortment includes most of the desirable colors.

Price: 20c per single root; \$2.00 per dozen; \$15.00 per 100.

Bridesmaid. White with red eye.

Champ Elysses. Purple-crimson.

H. O. Wilers. White, pink eye.

Peach Blossom. Pink.

Richard Wallace. White, carmine eye.

Rijnstroom. Rose-pink.

Mixed colors of pink, white, purple, 12c each; \$1.25 per dozen; \$10.00 per 100.



Hardy Phlox



HEDGE PLANTS

Where boundary markers are necessary, hedges are most attractive. Many of the deciduous shrubs are suitable for hedges; also the coniferous evergreens are frequently used. For an informal hedge use the deciduous shrubs, conifers, or any of the following, but where a close-clipped hedge is desired the ones listed below will give best results:

Privet, Amoor River (*Ligustrum amurense*). The finest hedge plant for the Southwest; grows rapidly; withstands drouth; holds its foliage well, frequently during the entire winter. Can be kept sheared to any height and in any shape desired. When left unsheared, it develops the most beautiful specimens for planting singly or in groups. Has beautiful frond-like branches and of spreading growth.

	Each	Doz.	100
1 year, 8 to 15 inches.....	\$1.15	\$1.25	\$8.00
1 year, 15 to 24 inches.....	.20	2.00	10.00
2 year, 2 to 3 ft.....	.30	3.00	16.00

Sheared in globe from 2 ft. in diameter, \$3.00 each; \$5.00 per pair.

Privet, California (*Ligustrum ovalifolium*). Of upright growth, rapid. Foliage of lighter green than the Armour. Most popular for hedging purposes, as well as single specimen plants. Holds its foliage through to spring in mild winters, but a severe freeze will cause its leaves to drop.

	Each	Doz.	100
1 year, 6 to 12 inches.....	\$0.10	\$0.75	\$4.00
1 year, 12 to 18 inches.....	.15	1.25	6.00
1 year, 2 to 3 ft.....	.20	2.00	9.00
2 year, 2 to 4 ft.....	.25	2.25	12.00

Privet, Japan (*Ligustrum Japonica*). Has large leaves, beautiful and glossy. Will grow to very large trees in South Texas. In North Texas hardy when temperature does not go below 5 degrees above zero, when younger plants will be partly killed to ground but older established specimens will only have branches killed back. Fine for massing, grouping, foundation planting, as well as hedging and specimen plants.

	Each	Doz.	100
12 to 18 inch.....	\$0.15	\$1.50	\$8.00
Bush Type, 2 ft.....	.40	4.00	30.00
Tree Type, smooth bodies up to 4 to 5 ft.....	.75	8.00	65.00

Hardy Orange (*Citrus Trifoliata*). This has proven by test here one of the most beautiful and efficient hedges known. In three years will turn stock. Does not sprout. As tap roots go straight down, does not exhaust soil any great distance away. Has proven perfectly hardy at 15 degrees below zero. In spring is full of beautiful white flowers, and full of yellow fruit in fall. It is easily transplanted.

	Each	Doz.	100
3 to 4 inch seedlings.....	.25	2.50	12.00
3 year, 2 to 3 ft.....	\$0.20	\$2.00	12.00

Euonymus Japonica. An evergreen similar in appearance to Box, but with larger, more glossy leaves and more rapid grower than the Box. Fine for single specimens. Also makes pretty hedging plants for walks and borders, as it does not grow near so rapidly as the privets. See under evergreens for prices.

Tamarix Plumosa. A very pretty feathery foliage tree that is evergreen. Used for making windbreaks as well as for ornamental hedging. (See also under Tree-Like Shrubs.)

	Each	Doz.	100
2 to 3 ft.....	\$0.15	\$1.25	\$7.00
3 to 4 ft.....	.20	1.75	12.00
4 to 6 ft.....	.25	2.50	16.00

Lodense Privet (*Ligustrum Nanum Compactum*). This is a new dwarf and distinct form of Privet of extremely compact and low growing habit. It has been under observation for the last four years and its habits of growth are unquestionably fixed. The foliage is rich dark green and of extreme hardness. It is particularly useful for low hedges and borders as it stands shearing very well and can be kept low and compact very easily.

	Each	Doz.	100
6-inch size	\$0.25	\$2.50	\$20.00

Ligustrum Lucidum. The Waxy leaved Privet; broad glossy green leaves. Handsome as specimen plants as well as for hedge. Specimen plants 18 inches, 50c each.

Nursery Block of **Rosedale Hybrid and Arborvitae**

Broad Leaved Evergreens

These comprise such Evergreens as Magnolia, Cape Jasmine, Laurel, etc. The same precautions must be observed in transplanting as with Conifers, and it is far safer and better in addition to these precautions to have the leaves removed, from most kinds, when taken up, and let them put out a new set of leaves. After being carefully planted and properly watered, it is well to mulch with coarse material to prevent rapid drying out.

Euonymus Japonica. An evergreen similar in appearance to Box, but with larger, more glossy leaves and more rapid grower than the Box. Fine for single specimens. Also makes pretty hedging plants for walks and borders, as it does not grow near so rapidly as the privets.

	Each	Doz.	100
4 to 6 inch.....	\$0.20	\$2.00	\$16.00
6 to 8 inch.....	.35	4.00	30.00
8 to 12 inch.....	.60	6.00	45.00
12 to 18 inch.....	.75	8.00	65.00
2 to 3 feet.....	1.00	10.00	90.00

Euonymus Japonica Compacta. A special form originated by J. B. Baker, which grows and forms without shearing a perfectly formed conical specimen.

6 to 10 inch.....\$1.00 each

Dwarf Evergreen Box. Small green glossy leaves. Perfectly hardy. Excellent for cemetery planting, and to edge walks and beds.

	Each	Doz.	100
3 to 4 inch.....	\$0.25	\$2.50	\$20.00
6 to 8 inch.....	.50	5.00	40.00

Magnolia Grandiflora. The grandest of all evergreens and flowering trees. Has large, glossy, bright green leaves. Succeeds throughout Texas and Oklahoma, as well as in other Southern states. By clipping off all but a few of the tip leaves when taken up, and treated as in our handling, they are readily transplanted.

We do not clip the leaves off unless so instructed.

	Each	Doz.
4 to 6 inch.....	\$0.50	\$ 5.00
6 to 15 inch.....	.75	8.00
15 to 24 inch.....	1.50	17.00
2 to 3 feet.....	3.00	32.00

Cape Jessamine. A beautiful plant with dark green glossy leaves, and in spring has most fragrant beautiful white flowers with wavy-like petals, from 1½ to 2 inches long in the bud. It is not full hardy in North Texas but is easily carried through the winter out of doors with some protection. Full hardy Central and South Texas.

	Each	Doz.
Bushy plants, 15 to 18 inches.....	\$0.40	\$4.00
18 to 24 inches.....	.60	6.00

EVERGREEN WILD PEACH or WILD CHERRY (So-called)

A tree-like shrub having numerous dark shiny green leaves about an inch long by three-fourths inch broad. Very attractive both in summer and winter. Large specimens are difficult to transplant and for this reason we suggest securing plants under three feet in height. Will attain a height of twenty feet in fifteen years and can be trimmed up to straight trunk, or branches left to grow from ground up as in the Magnolia. 12 to 15 inches, 50c each; 16 to 20 inches, 75c each.

Abelia Grandiflora. See first item in Shrub list, page 17.

Coniferous Evergreens

Much care should be exercised in transplanting Evergreens not to allow the roots to be exposed to sun or air. Our rule is to coat the roots, as soon as dug, with a puddle of earth or mud, and pack with moss.

Evergreens will be much benefitted in transplanting if protected from wind and sun until they begin to take hold of their new soil. This can be done by placing barrels or boxes over them. The spring winds are specially very hard

on transplanted Evergreens. Little care and good judgment will insure their success, while neglect will mean failure.

Compact Pyramidal Arborvitae. Does not need any shearing to keep it in compact perfect shape. Type we have best adapted in South-west.

6 to 8 inch size.....75c each
10 to 12 inch size.....\$1.00 each

Rosedale Hybrid. Globe form, feathery foliage, between arborvitae and cedar appearance. Light silver green.

4 to 6 inch size.....40c each
6 to 10 inch size.....60c each
10 to 12 inch size.....75c each

English Juniper. Tall pyramidal shape, light green foliage. Very pretty specimens.

2 to 3 feet.....\$1.00 each

Irish Juniper. Very formal in outline, pyramidal, glaucous green.

2 ft. size.....\$1.25 each

Italian Cypress. Grows straight up, making a tall narrow appearance. One of the most narrow growing evergreens for the height. Of rather rapid growth.

10 to 12 inch size.....\$1.00 each
12 to 18 inch size.....1.50 each

ORNAMENTAL VINES

Climbing Roses. See list under Roses.

Honeysuckle, Chinese Evergreen. Foliage light green, dense, rapid grower; flowers white and buff, 15c each.

Honeysuckle, Fuschia Leaved. Of the coral type, vine upright, flowers red on outside of corolla, with yellow inside, perpetual bloomer, very fragrant, generally evergreen, one of the best climbers. Foliage dark green. 25c each.

Honeysuckle, Halls. Flowers very fragrant, white in opening, becoming buff. Very profuse, perpetual from early spring until fall; evergreen. 20c each.

Trumpet Creeper. A stout, woody, handsome vine, with compound leaves and perpetual, waxy, large, tubular orange flowers in clusters; fine to ornament outhouses, tree bodies, etc., as it climbs by aerial roots. 10c each.

Wistaria. American purple. Hardy; fine for arbors, porch screens, etc. Profuse in early spring. 20c each.

Virginia Creeper (Ampelopsis quinquefolia.) Five lobed or fingered leaf; bright green in summer, turning scarlet in fall; completely covers dead trees, brick walls, fences. Not poisonous. 20c each.

Boston Ivy (Ampelopsis Veitchii.) 35c each.

Antigonon leptopus. (Pink Vine, Rose-on-the-Mountain, or Queen's Crown.) The most beautiful vine. A mass of pink with not a day's intermission, from the time it starts to bloom until frost. In South Texas it will start in June, in Central Texas in July and in North Texas it does not start until August.

Plant the roots in spring after ground warms up, or earlier if protected by mulch. The roots are slow to start, and vine first year will not show above ground until quite late in spring, but develops rapidly and covers well by midsummer. Dig up roots in fall, or cover ground with frost-proof mulch.

Price of Roots—35c each; \$4.00 per doz.

ROSES

DIRECTIONS FOR PLANTING, PRUNING AND FERTILIZING

Soil and Preparation of Same. The rose will adapt itself to almost any well-drained soil, but will give best results when planted in a good, rich, deep loam which has been thoroughly drained and well fertilized. If, however, the soil is thin and sandy it is advisable to add a good portion of heavy soil. It is best to plant roses in an open, sunny place where the plants will be exposed to a full light. Never plant roses under large trees or where the ground is taken up by the roots of adjacent trees. You can never expect to get good results unless the ground is kept free from grass and weeds and thoroughly cultivated. A mulching of straw, leaf mold, leaves, or thoroughly rotted cow manure is beneficial. During the growing season it is advisable to fertilize roses from time to time, using bone meal, well rotted cow manure or liquid manure, apply at intervals of a month or six weeks. So soon as the fertilizer is applied it should be worked into the soil.

Never use a spade in rose beds, but use a digging fork, as this is less likely to cause injury to the roots. After the beds have been cultivated, rake the surface smooth and even. Frequent stirring of the surface is beneficial. A top dressing of hardwood ashes is excellent.

Planting. We cannot emphasize too greatly the necessity of pruning all roses before transplanting. All weak growth should be cut out, leaving only the stoutest and most vigorous shoots, and these must be cut back to within 3 to 6 inches of the ground. Of course, the length to which these branches are to be cut back depends upon the vigor of the plant. The hole in which the plants are to be set must be of ample size. Place the plant in the hole about 1 inch deeper than it stood in the nursery row, provided it is on its own roots. Budded roses should have the budded portion set 2 to 3 inches below the level. Fill the hole half-full of soil, pour in water, let this settle, put in some more earth, firm this well about the roots, then fill in the hole and firm when the job is completed.

Water the plants whenever needed, and keep the soil well cultivated.

The best time to plant Field Grown Roses in the South is in the Fall, from November 10th to December 20th. They will then have opportunity for roots to get hold of soil and thus make earlier and larger blooms in Spring. Next best time is in February. They can be planted up to March 15th, but the late planting will not give as satisfactory results. It is too late after March 25th, as they are in new growth which will wilt and weaken plants on moving. If roses are wanted later, then secure the potted plants which can be found in Greenhouses. The potted plants of course, will not bloom as soon as the two-year field grown plants.

The Assortment is complete at opening of season in the fall, but as spring approaches, many varieties will be sold out and at close of spring we are cleaned up on most varieties, which of course pleases us from business point of view. But we wish to make every order satisfactory, and this is why we advise fall planting.

Be sure to look over the list of books on Roses on page 2. Best to plant in fall.

PRICES FIELD GROWN 2-YEAR PLANTS

50c each; 6 for \$2.75; 12 for \$5.00; 30 for \$12.00.

WHITE AND BLUSH

Antoine Revoire. Hybrid-Tea. Creamy white, delicately tinted with pink; extra large petals.

Bessie Brown. Hybrid-Tea. Creamy white flowers, distinctly beautiful bud. Sweetly scented.

Frau Karl Druschki. Hybrid-Perennial. Upright vigorous grower with bright large green leaves. Large snow white blooms. Called White American Beauty.

Kaiserin Augusta Victoria. Hybrid-Tea. Pure white, splendid large buds. Fine for cut flowers.

White Cochet. Identical in shape of flower and habit of plant with the Pink Cochet except the flowers are white, with outer petals turning pink after blooming out.

BUFF AND YELLOW

(Plants of this color not so vigorous as in other colors.)

Aaron Ward. Coppery Orange to Indian Yellow with beautiful bud. Pinkish fawn when full open.

Madam Constant Soupert. Tea. Citron yellow, shaded with rosy peach. Large pointed buds.

Madam Collette Martinet. Hybrid-Tea. Old gold in long bud shading of coppery orange in globular flower.

Jennie Guillimot. Hybrid-Tea. Deep saffron yellow, opening canary, with dark shadings. Long bud.

Lady Hillingdon. Tea. Buds of remarkable quality and elegance, of good size, opening into handsome flowers of clear apricot-yellow. Plant relatively hardy, of much vigor, and with an autumn-blooming habit.

Mrs. Arthur Robert Waddell. Hybrid-Tea. Well-shaped buds of deep apricot which open to graceful, loose-petaled flowers of the utmost elegance, the color paling to orange-salmon.

Sunburst. Long and lovely buds, which open to large and full flowers of distinct and beautiful sulphur-yellow, which stand the sun reasonably well.

Golden Spray. Hybrid-Tea. Long, pointed buds of deep yellow, opening to large, loose blooms of lemon-yellow on arching shoots that form loose and elegant sprays.

PINK

F. R. Patzger. Hybrid-Tea. Creamy buff; reverse of petals warm pink. Strong bush, stiff stems; most satisfactory free bloomer.



Madam Masson



Kaiserin Augusta Victoria

President Taft. Hybrid-Tea. Shell pink of shining, intense distinctive color. Fine stem; glossy foliage.

Pink Maman Cochet. Tea. Rich rosy pink, shaded with silvery rose on outer petals. A most satisfactory grower and bloomer for the South.

Jonkheer J. L. Mock. Hybrid-Tea. Clear Imperial pink, large fine buds on stiff stems. One of our best for cut flowers.

My Maryland. Hybrid-Tea. Salmon pink of a soft pleasing shade; sweet scented. Long pointed bud.

Pink Radiance. Hybrid-Tea. Brilliant rosy carmine, shaded with opaline-pink tints in the open flower. Strong grower and profuse bloomer.

William E. Smith. Tea. Seedling of Maman Cochet pollinated with K. A. Victoria. Creamy white shaded with pink. Glossy foliage, stiff stems.

Caroline Testout. Hybrid-Tea. Brilliant satiny-rose, deepening at center; broad petals, large flowers. The famous rose of Portland, Oregon.

Paul Neyron. Hybrid-Tea. Largest of all rose blooms. Bright shining pink clear and beautiful. Strong upright growth. Flowers on long stems, almost thornless.

Mrs. B. E. Cant. Tea. Large, double flowers, having deep rose outer petals, and inner petals of soft silvery rose, with suffusion of buff at base. Very vigorous grower; blooms all season.

CRIMSON AND RED

General McArthur. Hybrid-Tea. Vivid crimson scarlet, flowers larger than Meteor.

Meteor. Hybrid-Tea. Intense velvety crimson, large buds on long stems. Foliage deep green.

Hadley. Hybrid-Tea. Deep rich velvety crimson, with beautiful large buds, sweetly scented.

**Red Radiance.**

Madame Masson. Hybrid-Perennial. Massive double full flowers of intense red with crimson hue, equaling the American Beauty in size.

American Beauty. Hybrid-Perennial. Large rose color. Bush upright.

Red Radiance. Hybrid-Tea. Bright even shade of pure red, bearing most beautiful blooms on strong bush.

Etoile de France. Hybrid-Tea. Brilliant shade of clear red-crimson velvet. Large flowers on long stems, remarkably free blooming and vigorous.

Francis Scott Key. Hybrid-Tea. An American rose that differs from any other Hybrid-Tea in its immense size, the regular arrangement of its petals, and its rich crimson-red color. The plant is sturdy and a good bloomer, both in spring and fall.

Hoosier Beauty. Hybrid-Tea. An American sort of great merit. The bud is long and slender, while the flowers are large, full, and fine; plants vigorous and persistently blooming. Scarlet-red color.

J. B. Clark. Hybrid-Perennial. Intense deep scarlet, shaded blackish maroon, in exceedingly large and full blooms of moderate fragrance. Plant a rampant grower, blooming best in June, but sometimes repeating in the fall. Has been improperly classed with the Hybrid-Teas.

CLIMBING ROSES

Baltimore Belle. Pale blush passing to white, double flowers in beautiful clusters. Vine very vigorous and of rapid growth.

Crimson Rambler. Vivid crimson blooms borne in clusters, covering the entire vine during its blooming season. Vine vigorous making strong canes covering 20 feet or more in a season.

Climbing Meteor. Deep rich velvety crimson. Does not mass blooms but blooms constantly during blooming season.

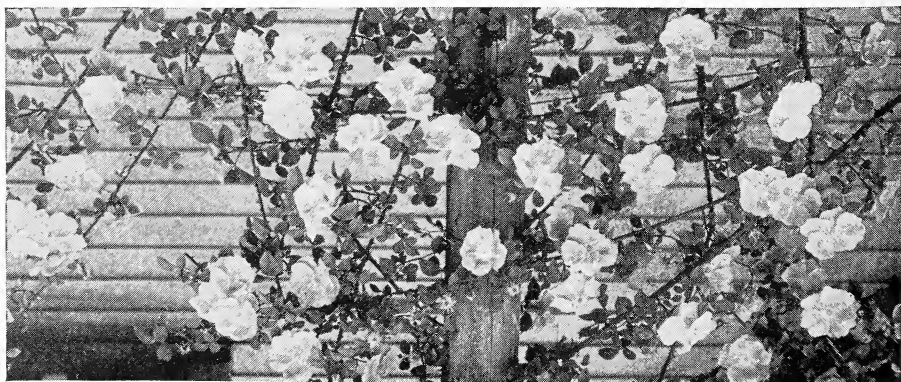
Dorothy Perkins. Similar to Crimson Rambler in forming mass of bloom, except the color is a shell pink fading into a deep rose.

Tausendschon. Hybrid-Tea. The buds on first opening are bright cherry-pink, changing as they develop to lighter shades, and eventually to almost white. The plant is of strong growth, and almost thornless. The variety merits its name of "Thousand Beauties."

Silver Moon. Hybrid-White. To the Rose-lover who has not enjoyed Silver Moon, a delightful experience is in store in contemplating this extraordinarily vigorous climber, decorative all through the growing season by reason of its great canes and deep, rich foliage but literally a wonder at bloom-time for its long, well-shaped buds of faint yellow which open into immense pure white flowers, often reaching 4 inches or more in diameter. These blooms are semi-double and with very distinctly curled and curved center petals which surrounds the bright yellow stamens and add piquancy to the whole effect. An indispensable white rose.

Aviateur Bleriot. HW. Exquisitely little buds of saffron-yellow, shaded apricot, opening to a lighter shade, and with delightful magnolia fragrance. Blooms in clusters.

Paul's Scarlet Climber. HW. By all means the most brilliant rose known in any class, because of its clear, vivid, shining scarlet in large, semi-double flowers which remain unusually long and in good condition on the plants.

**Silver Moon.**

PRICE LIST

Prices of all **Fruit Trees, Grape Vines, Berries** and all listed in this catalog, pages — to —. Prices of **Shade Trees, Shrubs, Hedge Plants, Roses, Evergreens**, and other items not here priced will be found priced under their respective heads.

These prices are for the stock, packed, f. o. b. Denison. See paragraphs 6, 7 and 8 under Business Information, on page —.

EXPLANATION. The prices given for "each" on any given quantity ordered. Multiply the quantity order by the price given under the proper column. For example if 20 Peach of the 4 to 5 ft. size are ordered, look in the second column where the rate is shown for quantities of 5 to 24, which is as noted as 35c. Then 20 trees at 35c will be \$7.00.

FRUIT TREES

	Rate "Each" in Respective Quantities.			
	1 to 4 Each	5 to 30 Each	31 to 300 Each	Over 300 Each
Peaches. All except Stubenrauch varieties.				
Size A—2 to 3 feet.....	\$0.15	\$0.14	\$0.13	\$0.12
Size B—3 to 4 feet.....	.25	.23	.21	.20
Size C—4 to 5 feet.....	.40	.35	.33	.30
Peaches. Stubenrauch varieties.				
Size A—2 to 3 feet.....	.25	.23	.21	.20
Size B—3 to 4 feet.....	.40	.35	.33	.30
Size C—4 to 5 feet.....	.60	.55	.50	.48
Apples. { Size A—3 to 4 feet.....	.25	.24	.23	.22
{ Size B—4 to 5 feet.....	.45	.43	.42	.40
San Jacinto. Special 5 to 6 ft. size.....	.60	.50	.48	.47
Crab Apple. —Same as Apple.				
Pears—Bartlett.				
Size A—3 to 4 feet.....	.40	.38	.36	.35
Size B—4 to 5 feet.....	.60	.56	.55	.52
Keiffer and Garber.				
Size A—3 to 4 feet.....	.30	.28	.26	.25
Size B—4 to 5 feet.....	.50	.48	.46	.45
Size C—5 to 6 feet.....	.75	.70	.65	.60
Apricots, Plums and Cherry-Plum.				
Size A—2 to 3 feet.....	.20	.18	.17	.16
Size B—3 to 4 feet.....	.30	.28	.27	.25
Size C—4 to 5 feet.....	.50	.47	.45	.40
Figs. { Size A—8 to 12 inches.....	.20	.18	.17	.15
{ Size B—12 to 18 inches.....	.30	.28	.27	.25
{ Size C—18 to 30 inches.....	.50	.45	.42	.40
Quinces. { One year .....	.20	.18	.17	.16
{ Two year .....	.35	.32	.30	.28
{ Three year .....	.50	.45	.40	.40
Mulberries. { Size A—2 to 3 feet.....	.20	.19	.18	.17
{ Size B—3 to 4 feet.....	.35	.33	.32	.30
{ Size C—4 to 5 feet.....	.50	.48	.47	.45
{ Size D—5 to 7 feet.....	.60	.57	.55	.55
Munson Mulberry. —Special 4 year. 3 inch caliper size.....	1.50	1.25	1.15	1.00
Plums, Cherry Plum. See under Apricots.				
Cherry. { Size A—3 to 4 feet.....	.60	.58	.57	.55
{ Size B—4 to 5 feet.....	.80	.75	.70	.67
{ Size A—2 to 3 feet.....	1.00	.95	.90	.85
Pecan. { Size B—3 to 4 feet.....	1.50	1.40	1.35	1.30
{ Size C—4 to 5 feet.....	1.75	1.60	1.60	1.60
Persimmons—Japan .....	.75	.65	.60	.50
Persimmons—American. Josephine, grafted.....	.60	.55	.50	
Josephine seedlings.				
2 year .....	.25	.23	.22	.20
4 year	1.00	.90	.85	
Grape Vines —1 year basis, 2 year same price.				
Concord, Headlight, Delaware, Fern, Last Rose, RONALDA.....	.15	.13	.12	.10
Albania, America, Brilliant, Bell, Blondin, Carman, Columbian, Catawba, Champanel, Captivator, Cloeta, Edna, Elvican, Herbeumont, Jacques, Lukfata, Lomanto, Ladana, Monito, Mericadel, Niagara, President, Rommel, R. W. Munson, Salem, Valhall.....	.25	.20	.15	.14
Armalaga, Bailey, Delakins, Dr. Collier, Extra, Ellen Scott, Marguerite, Mathilda, Minnie, Muench, Muscat Rose, Nitodal, Neva, Salamander, Volney, Winchell, Wapanuka, Wine King, Violet Chasselas.....	.40	.35	.33	.32

SMALL FRUITS

	Doz.	50	100	300	1000
Raspberries —All varieties.....	\$0.50	\$2.00	\$3.00	\$8.00	\$20.00
Blackberries — { Early Harvest .....	.40	1.50	2.50	6.00	15.00
{ Dallas .....	.40	1.50	2.50	6.00	15.00
{ McDonald .....	.50	2.00	3.00	8.00	24.00
{ Robison .....	.30	1.00	1.75	4.75	12.00
Dewberries — { Mayes .....	.75	3.00	5.00	14.00	40.00
{ Thornless .....	.75	3.00	5.00	12.00	35.00
Strawberries — { Lady Thompson, Aroma.....	.35	.85	1.25	3.00	7.50
{ KLONDIKE .....	.25	.60	1.00	2.50	6.00
{ Progressive, Giant .....	.40	1.00	1.75	5.00	12.00
Asparagus .....	.50	1.25	2.00	5.00	10.00

Shade Trees, page 18-19 Evergreens, page 27 Roses, page 28-30
Shrubs, page 20-24 Hedging Plants, page 26 Perennials, page 24-25

Ornamental Vines, page 28

Business Information, Terms and Suggestions

1. The **ORDER BLANK** accompanying this catalog is for the convenience of customers, and its use will facilitate the filling of orders. Any other matter should be written on a separate sheet of paper.

2. **ALWAYS GIVE FULL ADDRESS** every time you write. This is important. Please write your name and address very plainly, so that nothing will have to be deciphered or guessed.

3. **TERMS.** Our terms are Cash with Order. The prices are Net Cash. All prices have been so figured and discounts deducted. If we extended any credit or opened accounts, it would be necessary to have higher or increased prices.

4. **REMITTANCES** should be made payable to THE MUNSON NURSERIES, and best way to send them is by Bank Draft, Express Money Order, Post Office Money Order. Money if sent by registered mail is all right. Checks will be accepted from responsible parties, but as banks no longer grant overdrafts, we will hold order until check is collected, as experience shows checks are sometimes returned account no funds.

5. **RESERVATIONS** of stock will be made when one-half of the price accompanies the order. This is to accommodate those who are not ready to plant early in the season but wish to secure the stock before same is sold.

6. **THE PRICES** named in the catalog is for the stock at Denison and includes free packing on all orders of \$4.00 or more. The prices do not include paying of express or freight charges. We have found that by pricing the stock free on board cars at Denison, secures for the purchaser a lower price than if quotations included payment of transportation charges. **ACTUAL COST OF STOCK** plus **ACTUAL COST OF TRANSPORTATION** is lower than **DELIVERED PRICES** of most concerns, for in making delivery prices, an extra amount must be necessarily included to pay for long distances, and those who live nearer pay more for their stock than is just.

7. **FREE PACKING** is given all orders of \$4.00 or more. But on orders of less than \$4.00, 50 cents should be added to partly pay for the packing. Our packing is the best to carry the stock in the best manner and is expensive.

8. **SHIPPING INSTRUCTIONS.** Customers will please state whether they wish their order to be sent by Parcel Post, Express or Freight.

OUR SUGGESTIONS

8a. **PARCEL POST.** For shipments of grape vines, small shrubs, roses, and trees under three feet high, and not exceeding 50 in number, we find Parcel Post will be cheaper to points within 300 miles of sending point. If over 300 miles express will be cheaper than Parcel Post on all packages weighing 12 pounds or more. Within 150 miles, Parcel Post is cheaper than express on packages up to 40 pounds. Parcel Post is also convenient for making Rural Route deliveries, and even if cost is more, it is offset by the free Rural Delivery service.

8b. The Size Limit of Parcel Post is 84 inches in combined girth and length. For this reason no tree over four feet high can be sent, unless cut back, even if it weighs only a pound or two.

8c. **PARCEL POST CHARGES HAVE TO BE PREPAID**, and for this reason money will have to be sent to cover cost of postal charges, under the following scale:

	Under 150 miles	150 to 300 miles	300 to 600 miles	Over 600 miles
For the first 3 vines, roses or trees....	\$0.10	\$0.14	\$0.25	\$0.40
For each additional tree or vine above 3 and up to 8....	.01	.02	.03	.05

For each additional tree or vine above

8, add01 .01 .02 .04

9. **EXPRESS.** For all shipments up to 300 pounds the express is the more satisfactory, and not any more costly than freight. Even in heavy shipments express may cost more but the quicker service pays.

9a. **FREIGHT.** For very large and heavy shipments, and where quick delivery is not an element. All our shipments are so packed that they will carry several weeks by freight without injury to stock.

9b. **EXPRESS AND FREIGHT SHIPMENTS** can be sent "Charges Collect," and such charges are no more than if "Prepaid." For this reason no money has to be sent to cover Express or Freight charges.

10. **SUBSTITUTION.** We desire to follow our customers' wishes in this respect and have found that when our supply of stock ordered is exhausted, our customers ordinarily want us to substitute to the best of our judgment. We, therefore, substitute when necessary, unless instructed to the contrary. Please note in specified blank on our Order Sheet if you do not wish us to substitute in your order and we will gladly refund for shortages if any. Selection of varieties suitable to your locality is of first importance to us and our services to you can often be of more value, if you will leave the selection to us.

11. **NO AGENTS.** We do not employ any agents or salesmen, and have no connection with any other nursery. We deal direct with all our customers and are directly responsible to them and no one else. Many nurserymen, dealers and others buy stock of us to re-sell. Such buyers re-sell the stock in their own account and responsibility.

12. **IF STOCK IS RECEIVED DURING A FREEZE,** or if frozen when received, DO NOT OPEN IT in warm air. But place the bale or box in dark cellar, or bury in earth, completely covering until thawed out. Do not hurry the thaw by using hot water, or placing in room heated above 40 degrees. When so thawed out according to directions without exposure to sun or heat, it will open up in good condition. To avoid any risk of freezing, we will not start a shipment in face of a "blizzard." But sometimes such freezing spells will come while stock is enroute. Ordinary care by express company not to expose the stock should keep the frost out. We pack with non-conducting materials during the period of cold weather.

13. **SERVICE.** We are so equipped that we can get out, pack and ship most orders the first or second day after receipt of order. In some cases on account of character of stock, it may take longer. We leave most of our stock in the ground and dig fresh as wanted, so this takes longer to assemble an order than if the stock was all ready "cellared." There is a period of about two weeks late in the spring, that we are rushed with orders from those who wait until the last minute, and then when they order they want it right now. Under such conditions we will do our best to get out as quickly as possible, but in order to be fair we will wait upon each order in its turn. It is better to order a few days, or better, several days in advance if time stock is wanted; then we will not disappoint you with a tardy delivery.

14. **SHIPPING SEASON** opens November 1 and closes March 15th. Will accommodate late orders after March 15th if selections are still in stock and not too far advanced in new growth. Best months in which to plant are November, December and February.

15. **ERRORS AND COMPLAINTS.** We want every order to be satisfactorily filled, and the trial is not complete until satisfaction is given. There is any error or dissatisfaction, we appreciate it very much if you will let us and will appreciate it all the more if you let us know as soon after receipt of stock as possible, or not later than five days to admit adjustment. We will immediately and cheerfully correct any errors of our own.

16. **IT IS TO OUR INTEREST** to send out the very best stock possible, true to label, healthy and packed to arrive in good condition, and this we will do. But as we cannot prevent drouths, freezes, ravishes of insects, rabbits, diseases, planting in unsuitable soils, or locations, careless or improper planting, indifferent or ignorant cultivation, **WE DO NOT GUARANTEE STOCK TO LIVE** that arrived in good condition, after passing into other hands. Nor do

we insure or replace any stock sold at the prices quoted.

17. OUR GUARANTEE:

We guarantee to send:

- (a) Healthy stock,
- (b) Free from insects, diseases, etc.,
- (c) TRUE to Label,
- (d) Delivered in Good Condition.

Then our responsibility ceases. If we fail in these, we will

- (a) Replace with other stock of same value, or
- (b) Refund the purchase price of stock in question.

But it is mutually understood that we will not be liable for any greater amount or damages. If stock is not accepted on these terms, we should be notified at once, not over five days after receipt, and we will refund the money remitted and advise disposition of stock in question.

SPRAYERS AND SUPPLIES

We are not in the SPRAYER BUSINESS nor INSECTICIDE BUSINESS, but on account of the great importance of spraying we are listing herewith a few of the essential items. We are glad to supply these at the regular prices without profit to ourselves. We keep in stock the smaller sprayers and supplies which can be sent out on short notice. Barrel and larger size sprayers will be ordered from the factory. If interested in larger sprayers write to E. C. TOWN COMPANY, ROCHESTER, NEW YORK, for their complete catalog, mentioning the fact that you saw the notice in our catalog.

THE AUTO-SPRAY NO. 1.

The World's Standard Compressed Air Sprayer.



Adapted for every variety of spraying where a hand sprayer can be used. Made in heavy brass or galvanized iron as desired and has tank capacity of three gallons of solution. The pump is of heavy brass, 2 inches in diameter, and two or possibly three pumpings will empty the tank under higher and more constant pressure than any other knapsack sprayer. The brass tank will withstand chemical solutions, and is recommended, also the Auto-Pop shut-off, which is automatic in action and operates a self-cleaning wire through the nozzle.

Net Cash

Auto-Spray No. 1-B, brass tank, auto-pop. \$11.00
Auto-Spray No. 1-D, galv. tank, auto-pop. 7.50

THIS SPRAYER SHOULD BE IN THE HOUSE OF EVERY FLOWER LOVING FAMILY.

Prices of barrel and large size sprayers on application.

RED SNAPPER PLANT FOOD

This is a highly concentrated plant food made up scientifically to cover the needs of plant life, both out-of-doors and in window garden and conservatory. It has been on the market some

time; its advertisement has been nation-wide, and is probably well known to most of our customers. Easily applied, pleasant to use, and we are pleased to recommend it. By far the richest, most nutritious and yet harmless organic fertilizer for house plants and small fruits, climbing vines and shrubbery ever placed on the market. It is made from specially prepared and finely ground fish bonemeal and nitrogenous cartilage mixed with pulverized tobacco snuff. Put up in a concentrated form.

	By Express, Charges Collect, or packed with trees	By Parcel Post, Prepaid
12 oz. can.....	\$0.25	\$0.35
2 lb. can.....	.50	.65
5 lb. package.....	1.00	1.25

INSECTICIDES AND FUNGICIDES

Prices f. o. b. Denison. Postage extra.

Scalecide. The complete dormant spray for San Jose and all kinds of scale insects and winter spores of all fungus diseases.

1 quart cans.....	\$0.60
1 gallon cans.....	1.45
5 gallon cans.....	6.50

Prices on barrel lots on application.

Sulfocide. For prevention of all fungus diseases such as rots, mildew, leaf spot, canker, etc.

1 pint cans.....	\$0.50
1 quart cans.....	.75
1 gallon cans.....	2.25
5 gallon cans.....	9.00

Dry Lime-Sulphur. For eradicating all kinds of scale, preventing apple scab, peach leaf curl, brown rot of peach and plum, and other fungus trouble.

1 lb. cans.....	\$0.40
5 lb. cans.....	1.75

Bordeau-Fungi. (A dry form of Bordeaux Mixture and ready when diluted in water. Fresh Bordeaux Mixture can be made at home from many of the formulas published.)

1 lb. cans.....	\$0.50
5 lb. cans.....	2.00

Arsenate of Lead. For killing Curculio, Canker Worm, Codling Moth, Tent Caterpillar, Slug, Leaf Roller, Fruit Worms, Berry Moth, and other Eating Insects.

1/2 lb. package.....	\$0.30
1 lb. ....	.50
5 lb.	2.00

Black-Leaf 40. A concentrated Sulphate of Nicotine for killing all forms of aphids and all SUCKING INSECTS. A contact spray.

\$1.25 per 12 oz. can. Will dilute for 50 gallons spray. 1 oz. will make 4 gallons spray.

Krystal Gas. For killing peach tree borers.

1 lb. tins.....	\$1.00
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"Barbara"

The Stubenrauch Peach Originations

A list of Ten Varieties that cannot be excelled for Southwestern Planting.
For descriptions and details, see page 10.

J. W. STUBENRAUCH,
Mexia, Texas
Originator

THE MUNSON NURSERIES,
Denison, Texas
Introducers